

A model for the strategic implementation of
design policy in Taiwan

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ABSTRACT

This investigation examined the global and Taiwanese strategies for the support and promotion of good product design within the whole manufacturing environment. The ultimate aim focused upon the establishment of proposals for the implementation of a new design strategy for Taiwan.

The operation and provision of the national design support strategies of a range of countries (USA, Canada, UK, Germany, Italy, Japan and Korea) which have a reputation for successful design policies were evaluated as a foundation upon which to compare earlier design promotion strategies used in Taiwan. The performance of previous Taiwan design strategies was evaluated by a questionnaire survey of manufacturers, design companies, educationalists and government agencies.

The results obtained were dependent upon the sector surveyed and most were a logical outcome of the development of the manufacturing and design industries in Taiwan. This was dominated by a rapid expansion in the manufacture of products to specification for overseas companies; demands for generating Taiwanese designs and brands coming relatively late in the process of industrial development. For example, it is not surprising that manufacturers ask for assistance with establishing market intelligence systems and design capabilities (with government support) and specialist providers in these areas see industry as tardy in taking up their services. The results from the respondents were summarised in three SWOT analyses for manufacturers, design companies and educators. The main issues that needed to be addressed were identified.

A comparative study of the design strategies of other countries with those of Taiwan was undertaken and this led to a new model for a Taiwan design strategy. The new model was subjected to evaluation by groups representing a full range of interests; these included Taiwanese manufacturers, design companies, educationalists and government agencies. The feed-back obtained was considered and modifications made to generate the final model for a five-year strategic plan for promoting design within Taiwan. The final model contains 'recommendations' for the Taiwan Government, manufacturing industry, design companies and the design education sector.

A model for the strategic implementation of design policy in Taiwan

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Abbreviations / Acronyms

| | |
|---------------|---|
| 1. GNP | Gross National Productivity |
| 2. R.O.C | Republic of China (Taiwan) |
| 3. IMD | The Institute of Management and Development, Switzerland |
| 4. IDB | Industrial Development Bureau |
| 5. MOEA | The Ministry of Economic Affairs |
| 6. OEM | Original Equipment Manufacturing |
| 7. ODM | Original Design Manufacturing |
| 8. OBM | Original Brand Manufacturing |
| 9. DPC/CETRA | Design Promotion Center of the China External Trade Development Council (Taipei) |
| 10. CPTC | The China Productivity and Trade Center (Taiwan) |
| 11. CPC | The China Productivity Center (Taiwan) |
| 12. ICSID | International Council of Societies of Industrial Design |
| 13. TDC | The Taipei Design Center |
| 14. IDSA | Industrial Design Societies of American |
| 15. NEA | National Endowment for the Arts (USA) |
| 16. DX | Design Exchange organization (Canada) |
| 17. MITI | The Ministry of International Trade and Industry (Japan) |
| 18. SWOT | The Strengths, Weaknesses, Opportunities, and Threats |
| 19. INNOVALUE | Innovation and Value |
| 20. DPC | Design Promotion Center, Taiwan |
| 21. ADI | The Italian Industrial Designers Association |
| 22. R f F | (Rat fÜr Formgebung) The German Design Council |
| 23. DWB | Deutscher Werkbund (Germany) |
| 24. DIA | Design and Industries Association. UK |
| 25. DRU | Design Research Unit, UK |
| 26. D&AD | Designers and Art Directors Association, UK |
| 27. ADD | 1. Australian Design Development Institute 2. American Design Development office |
| 28. ADC | Australian Design Council |
| 29. NDP | National Design Partnership. USA |
| 30. USDC | U.S. Design Council |

| | |
|--------------|---|
| 31. DTI | U.S. Commission on Design, Technology and Innovation |
| 32. ARIAD | The Allison Research Index of Art and Design . UK |
| 33. NAO | The National Audit office, UK |
| 34. ICOGRADA | International Council of Graphic Design Association |
| 35. CSD | The Chartered Society of Designers, UK |
| 36. IFI | International Federation of Interior Architecture and Interior Designer |
| 37. NRW | Design Zentram Nordrhein Westfalen. Germany |
| 38. JIDA | Japan Industrial Design Association |
| 39. JIDPO | Japan Industrial Design Promotion Organization |
| 40. JDF | Japan Design Foundation |
| 41. IFDI | Industrial Design Association in France |
| 42. CIDA | China Industrial Design Association (Taiwan) |
| 43. TIDEX | The Taipei International Design Exhibition |
| 44. TAIDI | The Taipei International Design Interaction |
| 45. ECO | The Economic Cooperation Organization |
| 46. MIT | made in Taiwan |
| 47. DIT | Design in Taiwan |
| 48. G-Mark | Good Design Mark |
| 49. IDSA | Industrial Design Societies American |
| 50. MOTIE | The Ministry of Trade Industry and Energy, Korean |
| 51. KIDP | Korea Institute of Industrial Design and Packaging |
| 52. WTO | World Trade Organization |
| 53. EU | European Union |
| 54. ICE | Italy External Trade Institute |
| 55. TWTC | Taipei World Trade Center |
| 56. ISO | International Standard Organization |
| 57. WPO | World Packaging Organization |

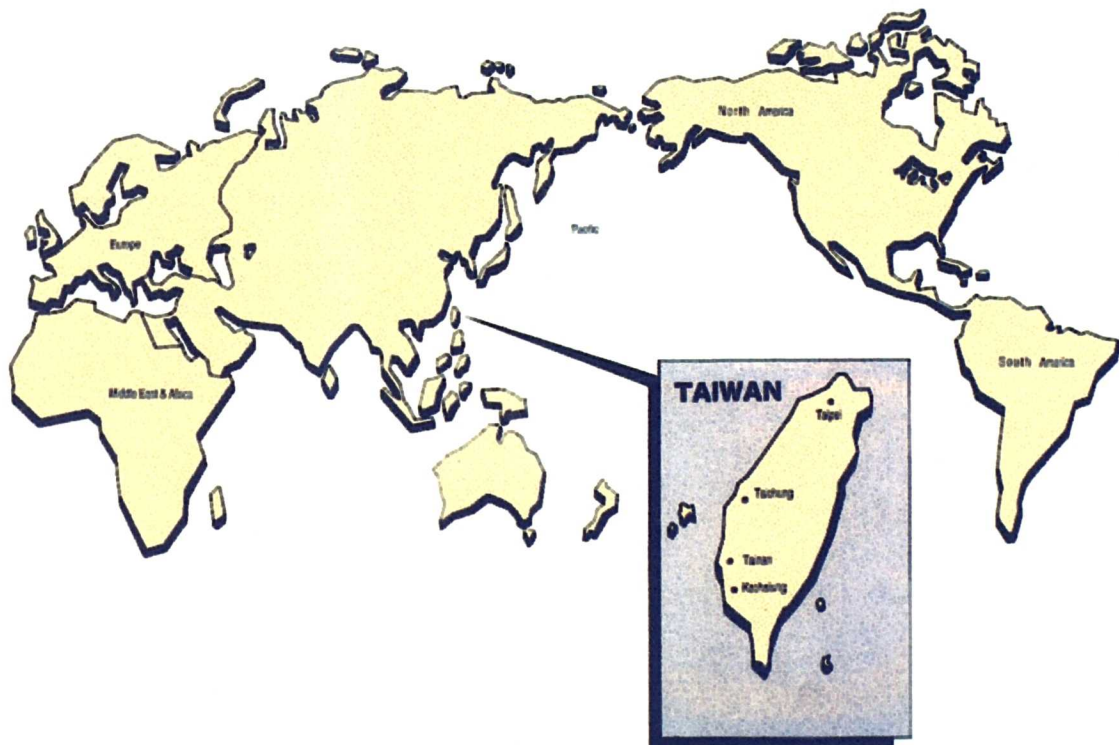
Author Declaration

1. During the period of registered study during which this dissertation was prepared, the author has not been registered for any other academic award or qualification.

2. The material included in this dissertation has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.

A model for the strategic implementation of design policy in Taiwan

Chapter 1 Introduction



A model for the strategic implementation of design policy in Taiwan

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Chapter 1 Introduction

1.1 Introductory Overview of Taiwan

The purpose of this introduction is to give an overview of the social, political, technological and economic influences which have shaped Taiwan's recent industrial past.

1.1.1 The Geography of Taiwan

Taiwan is an island at the center of the Asia Pacific Rim. To the west is Taiwan Strait, with Mainland China on the other side. The width at the strait's narrowest part is only 130 kilometers. The Pescadores lies in the middle of the strait between Taiwan and Mainland China. The Matsu Islands are on the northern coast, and Kinmen on the southern coast of the mainland's Fukien Province. The world-famous Hong Kong and Macao are further South along the coast of the mainland. On Taiwan's north there is the Ryukyu Islands. Further North are Japan and Korea. To the East of Taiwan is the boundless Pacific Ocean. On the Southwest of Taiwan in order of increasing distance are the Philippines, Vietnam, Malaysia and Singapore, and India is further west. It is obvious that Taiwan is a hub of transportation and a centre of economic activities of the Far East, with important countries such as the U.S. on its remote East, mainland China on its Northwest, Japan and Korea on its North, and Southeast Asian countries and Australia on its South.

At the northeastern tip of Taiwan is Cape Fu-kuei at Keelung, and at its southeastern tip is Oluanpy in Pingtung County. The distance from north to south of Taiwan is 394 kilometers, and the distance from east to west is 144 kilometers, with a total surface area of about 36,000 square kilometers (or 5,000 square miles) about the same size of The Netherlands. In the centre of Taiwan lies the Central Mountain Range, with coastal low-lying areas around it (see Figs 1.1 to 1.3).

All major cities are located in Western Taiwan, including Keelung, Taipei, Hsinchu, Taichung, Chiayi, Tainan, and Kaohsiung. On the East is the Ilan Plain and the narrow and long valley in Taitung. Major cities on the East of Taiwan include Ilan, Hualien, and Taitung, all of which have ample room for development. The population of Taiwan is around 21 million. Taipei, the capital and biggest city in Taiwan, lies in the North and is the political, industrial, commercial and transportation centre. It has also become an important city of international status. The second biggest city is Kaohsiung. Like Taipei, it is a municipality. Kaohsiung Harbor handles much of the imports and exports of goods. Taichung is the third biggest city and the administrative, cultural, industrial and commercial centre of the provincial government. Taichung Harbor, Kaohsiung Harbor, and Keelung Harbor are the top three ports of Taiwan. Hsinchu, the city lying in the middle between Taipei and Taichung, is famous for its Science-based Industrial park and is a R & D centre of Taiwan's hi-tech. The Industrial Development Bureau under the Ministry of Economic Affairs is responsible for supervising the planning and construction of the parks. Building Taiwan into an "Island of Technology" has

become a national policy.



Figure 1.1 Map of Taiwan



Figure 1.2 Map of Asia and Taiwan

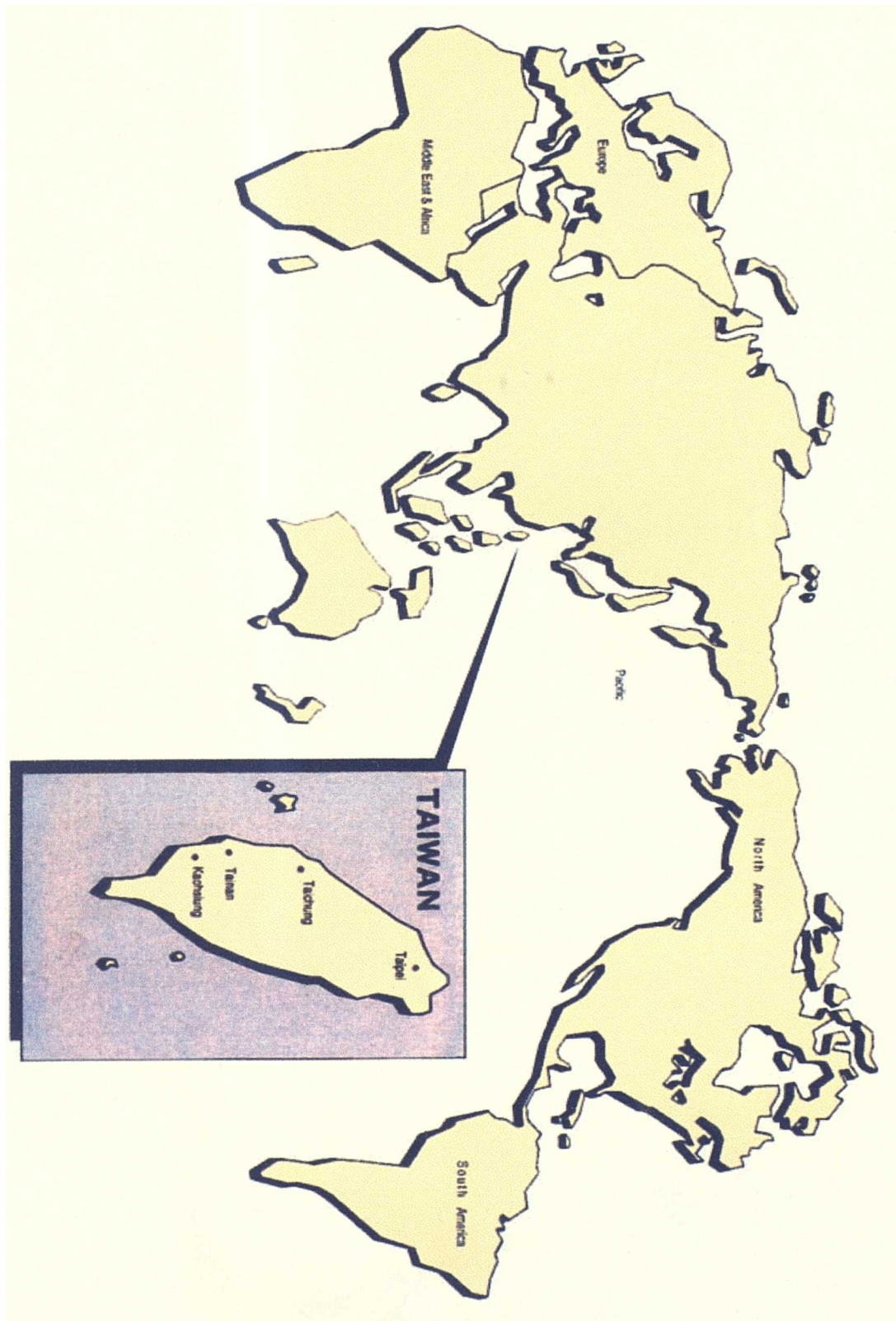


Figure 1.3 Map of the world and Taiwan

1.1.2 An Analysis of Taiwan's Trade and Industrial Development

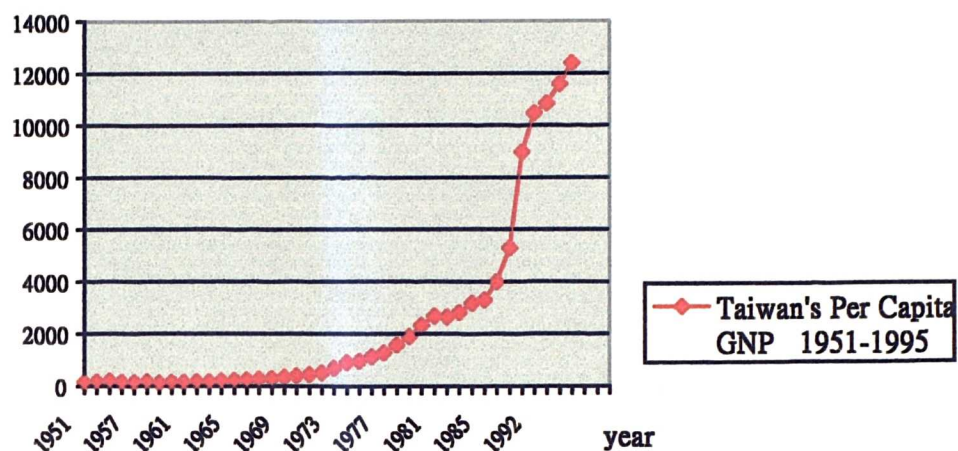
Taiwan is now one of the world's important manufacturing nations. The industrial development started soon after World War II and the state of its development is illustrated in the figures below.

1.1.2.1 Taiwan's Per Capita GNP 1951~1995

Unit USD;%

| Total Value | | | Total Value | | |
|-------------|-------|-------------|-------------|-------|-------------|
| Year | Value | Growth Rate | Year | Value | Growth Rate |
| 1951 | 145 | ... | 1973 | 695 | 33.14 |
| 1954 | 177 | 22.06 | 1974 | 920 | 32.37 |
| 1955 | 203 | 14.69 | 1975 | 964 | 4.78 |
| 1956 | 141 | -30.5 | 1976 | 1132 | 17.43 |
| 1957 | 160 | 13.48 | 1977 | 1301 | 14.93 |
| 1958 | 173 | 8.13 | 1978 | 1577 | 21.21 |
| 1959 | 131 | -24.28 | 1979 | 1920 | 21.75 |
| 1960 | 154 | 17.56 | 1980 | 2344 | 22.08 |
| 1961 | 152 | -1.29 | 1981 | 2669 | 13.86 |
| 1962 | 162 | 6.58 | 1982 | 2653 | 0.60 |
| 1963 | 178 | 9.88 | 1983 | 2823 | 6.41 |
| 1964 | 203 | 14.04 | 1984 | 3167 | 12.19 |
| 1965 | 217 | 6.89 | 1985 | 3297 | 4.10 |
| 1966 | 237 | 9.22 | 1986 | 3993 | 21.11 |
| 1967 | 267 | 12.66 | 1987 | 5298 | 32.68 |
| 1968 | 304 | 13.86 | 1991 | 8982 | 69.54 |
| 1969 | 345 | 13.49 | 1992 | 10470 | 16.57 |
| 1970 | 389 | 12.75 | 1993 | 10852 | 3.65 |
| 1971 | 443 | 13.88 | 1994 | 11597 | 6.86 |
| 1972 | 522 | 17.83 | 1995 | 12396 | 6.89 |

Table 1.1 Taiwan's Per Capita GNP 1951~1995,
Source of Information: The Ministry of Finance, ROC



Taiwan's Per Capita GNP 1951-1995

Figure1.4 Taiwan's Per Capita GNP 1951-1995

Source of Information: The ministry of Finance, ROC

1.1.2.2 Taiwan's Import and Export Statistics 1990 - 1997

unit: Million %

| Year | Total Value | | Export | | Import | | Balance | |
|------|-------------|-------------|-----------|-------------|-----------|-------------|----------|-------------|
| | Value | Growth Rate | Value | Growth Rate | Value | Growth Rate | Value | Growth Rate |
| 1990 | 121,930.0 | 2.8 | 67,210.0 | 1.4 | 54,720.0 | 4.7 | 12,490.0 | -11.0 |
| 1991 | 139,040.0 | 14.0 | 76,180.0 | 13.3 | 62,860.0 | 14.9 | 13,320.0 | 6.6 |
| 1992 | 153,480.0 | 10.4 | 81,470.0 | 6.9 | 72,010.0 | 14.6 | 9,460.0 | -29.0 |
| 1993 | 162,150.0 | 5.6 | 85,090.0 | 4.4 | 77,060.0 | 7.0 | 8,030.0 | -15.1 |
| 1994 | 178,400.0 | 10.0 | 93,050.0 | 9.4 | 85,350.0 | 10.8 | 7,700.0 | -4.1 |
| 1995 | 215,210.0 | 20.6 | 111,660.0 | 20.0 | 103,550.0 | 21.3 | 8,110.0 | 5.3 |
| 1996 | 218,311.8 | 1.4 | 115,941.8 | 3.8 | 102,370.0 | -1.1 | 13,571.8 | 67.3 |
| 1997 | 236,508.2 | 8.3 | 122,073.8 | 5.3 | 114,434.4 | 11.8 | 7,639.4 | -43.7 |

Table 1.2 Taiwan's Import and Export Statistics 1990-1997

Source: CETRA Market Research Dept.

1.1.2.3 Taiwan's Import and Export Statistics by Area 1997

unit: Million %

| Area | Total Value | | Export | | | Import | | |
|---------------|-------------|------------|-----------|------------|-------------|-----------|------------|-------------|
| | Value | Percentage | Value | Percentage | Growth Rate | Value | Percentage | Growth Rate |
| Asia | 116,603.0 | 49.3 | 61,585.2 | 50.4 | 1.4 | 55,017.8 | 48.1 | 12.6 |
| North America | 55,985.6 | 23.7 | 31,155.5 | 25.5 | 10.2 | 24,830.1 | 21.7 | 16.4 |
| Europe | 40,020.0 | 16.9 | 18,419.4 | 15.1 | 8.7 | 21,600.6 | 18.9 | 7.2 |
| The Middle E | 6,966.4 | 2.9 | 2,763.1 | 2.3 | 12.3 | 4,203.3 | 3.7 | 3.1 |
| Others | 16,933.2 | 7.2 | 8,150.6 | 6.7 | 8.4 | 8,782.6 | 7.7 | 10.4 |
| Total | 236,508.2 | 100.0 | 122,073.8 | 100.0 | 5.3 | 114,434.4 | 100.0 | 11.8 |

Table 1.3 Taiwan's Import and Export Statistics 1997 by Area

Source: Import & Export Statistics Report, The Ministry of Finance, ROC

1.1.2.4 Trading Values with Taiwan's Ten Biggest Trading Partners 1997

Unit : Million ; %

| Country | Total Value | | Export | | Import | | Balance | |
|-----------|-------------|-------------|----------|-------------|----------|-------------|-----------|-------------|
| | Value | Growth Rate | Value | Growth Rate | Value | Growth Rate | Value | Growth Rate |
| The U.S. | 52,799.6 | 12.7 | 29,556.5 | 10.0 | 23,243.1 | 16.4 | 6,313.4 | -8.4 |
| Japan | 40,722.0 | -1.0 | 11,700.3 | -14.3 | 29,021.7 | 5.6 | -17,321.4 | 25.2 |
| Hong Kong | 30,703.8 | 7.8 | 28,707.7 | 7.2 | 1,996.1 | 17.1 | 26,711.6 | 6.5 |
| Germany | 9,060.8 | 4.5 | 3,691.6 | 1.3 | 5,369.2 | 6.9 | -1,677.6 | 21.6 |
| Singapore | 8,045.5 | 9.3 | 4,895.1 | 7.0 | 3,150.4 | 13.0 | 1,744.7 | -2.2 |
| Korea | 7,391.7 | 8.3 | 2,367.2 | -11.1 | 5,024.5 | 20.7 | -2,657.3 | 77.1 |
| Malaysia | 7,266.3 | 11.5 | 3,038.0 | 2.9 | 4,228.3 | 18.6 | -1,190.3 | 94.7 |
| France | 6,120.3 | 14.0 | 1,394.3 | 6.8 | 4,726.0 | 16.4 | -3,331.7 | 20.9 |
| Holland | 5,936.3 | 12.1 | 4,298.0 | 12.4 | 1,638.3 | 11.4 | 2,659.7 | 13.1 |
| The U.K. | 5,231.0 | 13.4 | 3,278.2 | 16.8 | 1,952.8 | 8.2 | 1,325.4 | 32.3 |

Table 1.4 Trading Values with Taiwan's Ten Biggest Trading Partners 1997

Source: Import & Export Statistics Report, The Ministry of Finance, ROC

1.1.2.5 Export Values with Taiwan's Five Biggest Export Market 1996-1997

Unit : Million : %

| Country | 1997 | | 1996 | |
|-----------|---------|------------|---------|------------|
| | Export | Percentage | Export | Percentage |
| The U.S | 11458.9 | 23.50 | 10533.2 | 22.46 |
| Hong Kong | 10908.8 | 22.37 | 10423.6 | 22.23 |
| Japan | 5084.5 | 10.43 | 5783.7 | 12.33 |
| Singapore | 1930.8 | 3.96 | 1948.5 | 4.16 |
| Holland | 1851.4 | 3.80 | 1615.1 | 3.44 |
| Others | 17521.2 | 35.94 | 16591.0 | 35.38 |

Table 1.5 Export Values with Taiwan's Five Biggest Export Market 1996-1997
Source: Import & Export Statistics Report, The Ministry of Finance, ROC

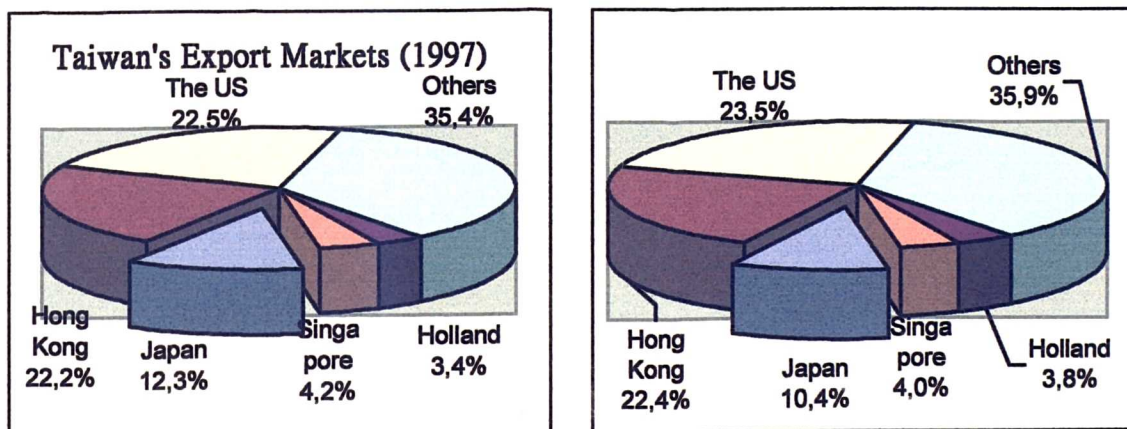


Figure 1.5 Pie Chart on Taiwan's Major Export Markets
Source: Import & Export Statistics Report, The Ministry of Finance, ROC

Unit : Million • %

| | Product Category | 1997 | Percentage | 1996 | Percentage | Increase/ Decrease Amount | Growth Rate |
|----|---|-----------|------------|-----------|------------|---------------------------------|----------------|
| 1 | Electronics | 16,025.3 | 14.8 | 16,631.6 | 14.3 | 1,393.7 | 8.4 |
| 2 | Information & Telecommunications | 14,451.3 | 11.8 | 12,546.0 | 10.8 | 1,905.3 | 15.2 |
| 3 | Gauze | 11,745.5 | 9.6 | 11,015.7 | 9.5 | 729.8 | 6.6 |
| 4 | Machinery | 9,653.9 | 7.9 | 9,482.2 | 8.2 | 171.7 | 1.8 |
| 5 | Iron & Steel Products | 6,653.3 | 5.5 | 5,718.5 | 4.9 | 934.8 | 16.3 |
| 6 | Vehicles, Airplanes, Ships & relevant Transportation | 5,553.5 | 4.5 | 5,215.4 | 4.5 | 338.1 | 6.5 |
| 7 | Metal Products | 4,882.1 | 4.0 | 4,527.2 | 3.9 | 354.9 | 7.8 |
| 8 | Electrical Machinery | 4,769.7 | 3.9 | 4,224.2 | 3.6 | 545.5 | 12.9 |
| 9 | Chemicals | 3,277.8 | 2.7 | 3,257.4 | 2.9 | 20.4 | 0.6 |
| 10 | Plastic Products | 3,131.6 | 2.6 | 3,072.8 | 2.7 | 58.8 | 1.9 |
| 11 | Textiles(Excluding Gauze & Garment) | 2,470.9 | 2.0 | 2,366.2 | 2.0 | 104.7 | 4.4 |
| 12 | Garment | 2,451.2 | 2.0 | 2,286.0 | 2.0 | 165.2 | 7.2 |
| 13 | Toys, Games, | 2,385.4 | 2.0 | 2,671.2 | 2.3 | -285.8 | -10.7 |
| 14 | Optics, Photography, Measurement & Medical Products | 1,734.2 | 1.4 | 1,453.1 | 1.3 | 281.1 | 19.3 |
| 15 | Furniture | 1,700.8 | 1.4 | 1,738.6 | 1.5 | -37.8 | -2.2 |
| 16 | Fur & Hide Products | 1,456.3 | 1.2 | 1,445.9 | 1.2 | 10.4 | 0.7 |
| 17 | Aquatic Products | 1,101.5 | 0.9 | 1,092.6 | 0.9 | 8.9 | 0.8 |
| 18 | Rubber Products | 1,075.9 | 0.9 | 1,028.7 | 0.9 | 47.2 | 4.6 |
| 19 | Footwear | 1,004.9 | 0.8 | 1,209.8 | 1.0 | -204.9 | -16.9 |
| 20 | Household Electrical Appliances | 828.9 | 0.7 | 890.1 | 0.8 | -61.2 | -6.9 |
| 21 | Treated Foodstuffs | 498.2 | 0.4 | 585.2 | 0.5 | -87.0 | -14.9 |
| 22 | Horology | 340.5 | 0.3 | 426.1 | 0.4 | -85.6 | -20.1 |
| 23 | Clocks & Watches | 320.9 | 0.3 | 379.0 | 0.3 | -58.1 | -15.3 |
| 24 | Ceramics | 215.4 | 0.2 | 256.7 | 0.2 | -41.3 | -16.1 |
| 25 | Plywood | 139.5 | 0.1 | 151.4 | 0.1 | -11.9 | -7.9 |
| 26 | Other | 22,205.3 | 18.2 | 22,270.2 | 19.1 | -64.9 | -0.3 |
| | Total | 122,073.8 | 100.0 | 115,941.6 | 100.0 | 6,132.0 | 5.3 |

1.1.2.6 Taiwan's Major Export Commodities 1996-1997

Table 1. 6 Taiwan's Major Export Commodities 1996-1997

Source: Import & Export Statistics Report, The Ministry of Finance, ROC

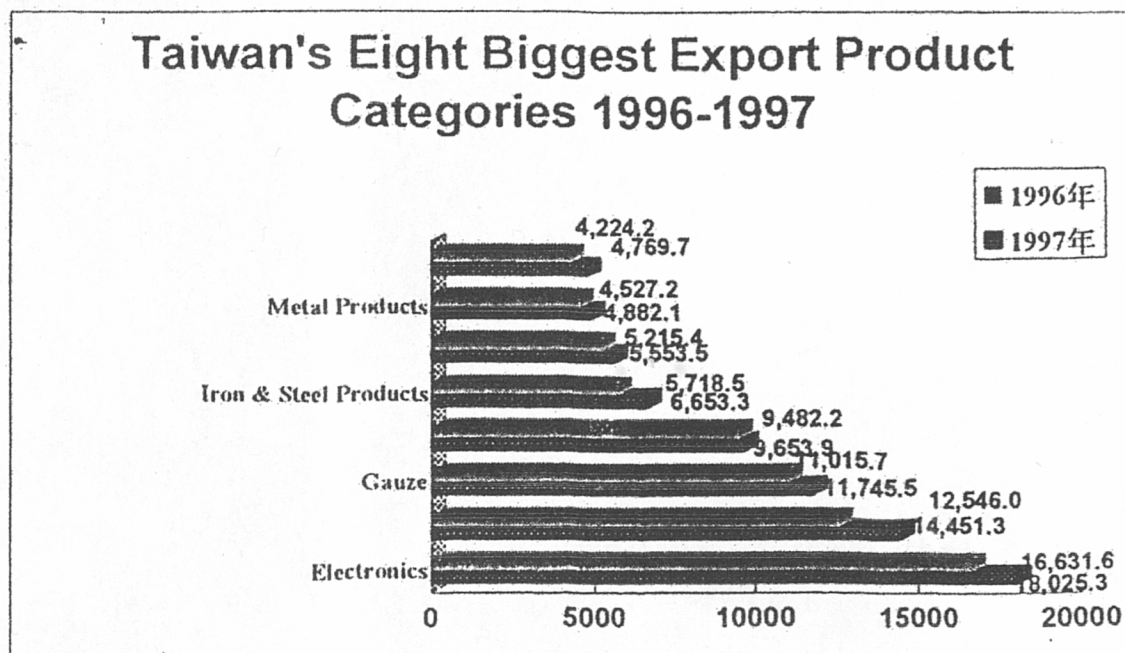


Figure 1.6 Taiwan's Eight Biggest Export Product Categories 1996-1997

Source: Import & Export Statistics Report, The Ministry of Finance, ROC

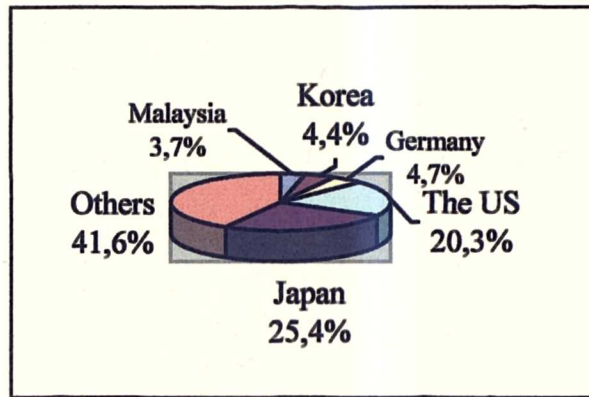
1.1.2.7 Import Values with Taiwan's Five Biggest Import Market 1996-1997

| Country | 1997 | Percentage | 1996 | Percentage |
|----------|----------|------------|----------|------------|
| Japan | 29,021.7 | 25.4 | 27,493.0 | 26.9 |
| The U.S | 23,243.1 | 20.3 | 19,971.8 | 19.5 |
| German | 5,369.2 | 4.7 | 5,023.4 | 4.9 |
| Korea | 5,024.5 | 4.4 | 4,161.7 | 4.1 |
| Malaysia | 4,228.3 | 3.7 | 3,565.2 | 3.5 |
| Others | 47,547.6 | 41.6 | 42,154.9 | 41.2 |

Table 1.7 Import Values with Taiwan's Five Biggest Import Market 1996-1997

Source: Import & Export Statistics Report
The Ministry of Finance, ROC

1997



1996

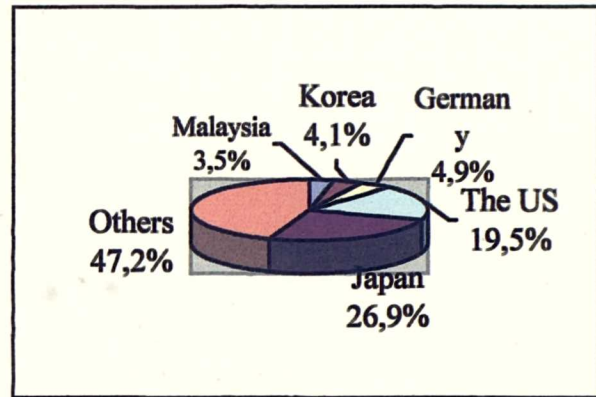


Figure 1.7 Pie Chart on Taiwan's Major Import Markets
Source: Import & Export Statistics Report,
The Ministry of Finance, ROC

1.1.2.8 Taiwan's Major Import Commodities 1996-1997

| | Product Category | 1997 | Percentage | 1996 | Percentage | Increase/ Decrease Amount | Growth Rate |
|----|--|------------------|--------------|------------------|--------------|---------------------------------|-------------|
| 1 | Electronics | 18,656.9 | 16.3 | 16,215.3 | 15.8 | 2,441.6 | 15.1 |
| 2 | Machinery | 11,485.0 | 10.0 | 11,154.5 | 10.9 | 330.5 | 3.0 |
| 3 | Iron & Steel Products | 6,317.9 | 5.5 | 5,710.3 | 5.6 | 607.6 | 10.6 |
| 4 | Organic Chemicals | 5,535.9 | 4.8 | 5,632.3 | 5.5 | -96.4 | -1.7 |
| 5 | Metal Products | 5,356.5 | 4.7 | 4,708.3 | 4.6 | 648.2 | 13.8 |
| 6 | Vehicles, Airplanes, Ships & relevant Transportation | 5,361.4 | 4.7 | 4,554.3 | 4.4 | 807.1 | 17.7 |
| 7 | Crude Oil | 5,086.5 | 4.4 | 4,851.7 | 4.7 | 234.8 | 4.8 |
| 8 | Optics, Photography, Measurement & Medical Products | 5,084.7 | 4.4 | 4,454.6 | 4.4 | 630.1 | 14.1 |
| 9 | Electrical Machinery | 3,821.0 | 3.3 | 3,266.5 | 3.2 | 554.5 | 17.0 |
| 10 | Information & Telecommunications | 3,531.8 | 3.1 | 2,744.7 | 2.7 | 787.1 | 28.7 |
| 11 | Pulp, Paper & Printed Matter | 2,081.0 | 1.8 | 2,097.9 | 2.0 | -16.9 | -0.8 |
| 12 | Plastic Products | 1,792.4 | 1.6 | 1,614.5 | 1.6 | 177.9 | 11.0 |
| 13 | Gold | 1,131.0 | 1.0 | 1,142.2 | 1.1 | -11.2 | -1.0 |
| 14 | Corn | 847.2 | 0.7 | 1,168.2 | 1.1 | -321.0 | -27.5 |
| 15 | Treated Foodstuffs | 935.1 | 0.8 | 873.5 | 0.9 | 61.6 | 7.1 |
| 16 | Soy Beans | 857.6 | 0.7 | 852.2 | 0.8 | 5.4 | 0.6 |
| 17 | Plywood | 770.4 | 0.7 | 740.6 | 0.7 | 29.8 | 4.0 |
| 18 | Household Electrical Appliances | 506.6 | 0.4 | 499.4 | 0.5 | 7.2 | 1.4 |
| 19 | Cotton | 453.1 | 0.4 | 562.4 | 0.5 | -109.3 | -19.4 |
| 20 | Clocks & Watches | 276.9 | 0.2 | 272.6 | 0.3 | 4.3 | 1.6 |
| 21 | Wheat | 242.2 | 0.2 | 278.0 | 0.3 | -35.8 | -12.9 |
| 22 | Others | 34,303.3 | 30.0 | 28,976.0 | 28.3 | 5,327.3 | 18.4 |
| | Total | 114,434.4 | 100.0 | 102,370.0 | 100.0 | 12,064.4 | 11.8 |

Table 1.8 Taiwan's Major Import Commodities 1996 -1997

Source: Import & Export Statistics Report, The Ministry of Finance, ROC
The Ministry of Finance, ROC

Taiwan's Export & Import from January to May of 1999 (Comparison by countries)

UNIT: U. S. \$MILLION

| | JAN. - MAY, 1999 | | | | | JAN. - MAY, 1998 | | | | | COMPARISON | | | |
|-------------------|------------------|-------|----------|-------|-----------|------------------|-------|----------|-------|-----------|------------|------|-----------|--------|
| | EXPORTS | | IMPORTS | | BALANCE | EXPORTS | | IMPORTS | | BALANCE | EXPORTS | | IMPORTS | |
| | AMOUNT | % | AMOUNT | % | | AMOUNT | % | AMOUNT | % | | AMOUNT | % | AMOUNT | % |
| TOTAL | 47,574.3 | 100.0 | 42,132.8 | 100.0 | 5,441.5 | 45,328.2 | 100.0 | 44,608.5 | 100.0 | 719.7 | 2,246.1 | 5.0 | - 2,475.7 | - 5.5 |
| 1. U.S.A | 12,208.5 | 25.7 | 7,604.9 | 18.0 | 4,603.6 | 11,516.5 | 25.4 | 8,862.7 | 19.9 | 2,653.8 | 692.0 | 6.0 | - 1,257.8 | - 14.2 |
| 2. HONGKONG | 10,144.4 | 21.3 | 837.8 | 2.0 | 9,306.6 | 10,285.7 | 22.7 | 812.1 | 1.8 | 9,473.6 | 141.3 | 1.4 | 25.7 | 3.2 |
| 3. JAPAN | 4,599.8 | 9.7 | 11,414.2 | 27.1 | - 6,814.4 | 3,921.9 | 8.7 | 11,552.5 | 25.9 | - 7,630.6 | 677.9 | 17.3 | - 138.3 | - 1.2 |
| 4. NETHERLANDS | 1,838.9 | 3.9 | 371.0 | 1.4 | 1,267.9 | 1,792.7 | 4.0 | 693.6 | 1.6 | 1,099.1 | 46.2 | 2.6 | - 122.6 | - 17.7 |
| 5. GERMANY | 1,639.5 | 3.4 | 2,032.1 | 4.8 | - 392.6 | 1,739.0 | 3.8 | 2,168.0 | 4.9 | - 429.0 | 99.5 | 5.7 | - 135.9 | - 6.3 |
| 6. SINGAPORE | 1,426.1 | 3.0 | 1,266.2 | 3.0 | 159.9 | 1,401.5 | 3.1 | 1,208.6 | 2.7 | 192.9 | 24.6 | 1.8 | 57.6 | 4.8 |
| 7. UNITED KINGDOM | 1,423.9 | 3.0 | 714.7 | 1.7 | 709.2 | 1,313.7 | 2.9 | 793.6 | 1.8 | 520.1 | 110.2 | 8.4 | - 78.9 | - 9.9 |
| 8. MALAYSIA | 1,052.3 | 2.2 | 1,522.3 | 3.6 | - 470.0 | 914.6 | 2.0 | 1,533.2 | 3.4 | - 618.6 | 137.7 | 15.1 | - 10.9 | - 0.7 |
| 9. PHILIPPINES | 1,032.9 | 2.2 | 810.9 | 1.9 | 222.0 | 757.3 | 1.7 | 729.2 | 1.6 | 28.1 | 275.6 | 36.4 | 81.7 | 11.2 |
| 10. KOREA, REP | 952.5 | 2.0 | 2,749.5 | 6.5 | - 1,797.0 | 599.7 | 1.3 | 2,310.4 | 5.2 | - 1,710.7 | 352.8 | 58.8 | 439.1 | 19.0 |
| 11. THAILAND | 849.7 | 1.8 | 965.1 | 2.3 | - 115.4 | 811.9 | 1.8 | 789.9 | 1.8 | 22.0 | 37.8 | 4.7 | 175.2 | 22.2 |
| 12. AUSTRALIA | 736.7 | 1.5 | 1,209.1 | 2.9 | - 472.4 | 649.5 | 1.4 | 1,235.1 | 2.8 | - 585.6 | 87.2 | 13.4 | - 25.0 | - 2.1 |
| 13. CANADA | 690.7 | 1.5 | 447.1 | 1.1 | 243.6 | 660.3 | 1.5 | 531.8 | 1.2 | 128.5 | 30.4 | 4.6 | - 84.7 | - 15.9 |
| 14. FRANCE | 622.0 | 1.3 | 825.0 | 2.0 | - 203.0 | 541.2 | 1.2 | 1,945.9 | 4.4 | - 1,404.7 | 80.8 | 14.9 | - 1,120.9 | - 57.6 |
| 15. ITALY | 604.2 | 1.3 | 544.3 | 1.3 | 59.9 | 629.2 | 1.4 | 631.0 | 1.4 | 1.8 | 25.0 | 4.0 | - 86.7 | - 13.7 |
| 16. INDONESIA | 474.0 | 1.0 | 818.5 | 1.9 | - 344.5 | 445.8 | 1.0 | 864.3 | 1.9 | - 418.5 | 28.2 | 6.3 | - 45.8 | - 5.3 |
| 17. BELGIUM | 331.0 | 0.7 | 176.2 | 0.4 | 154.8 | 383.8 | 0.8 | 208.2 | 0.5 | 175.6 | 52.8 | 13.8 | - 32.0 | - 15.4 |
| 18. MEXICO | 328.1 | 0.7 | 193.6 | 0.5 | 134.5 | 314.2 | 0.7 | 89.4 | 0.2 | 224.8 | 13.9 | 4.4 | 104.2 | 16.6 |
| 19. SWITZERLAND | 154.9 | 0.3 | 449.6 | 1.1 | - 294.7 | 129.8 | 0.3 | 476.3 | 1.1 | - 346.5 | 25.1 | 19.3 | - 26.7 | - 5.6 |
| 20. SAUDI ARABIA | 147.7 | 0.3 | 450.6 | 1.1 | - 302.9 | 176.2 | 0.4 | 539.5 | 1.2 | - 363.3 | 28.5 | 16.2 | - 88.9 | - 16.5 |
| 21. OTHER | 6,316.5 | 13.2 | 6,530.1 | 15.4 | - 213.6 | 6,343.7 | 13.9 | 6,633.2 | 14.7 | - 289.5 | 27.2 | 0.4 | - 103.1 | - 1.6 |

Table 1.9 Information source: Department of Statistics, Ministry of Finance, Taiwan.

1.1.3 Taiwan's Global Competitiveness

In a report on global competitiveness, the Institute of Management and Development (IMD) in Lausanne, pointed out that in 1997 the competitiveness of countries in a certain region had wide fluctuations.

The world competitiveness rankings compiled by IMD for 1996 and 1997

| Ranking | 1996 | 1997 |
|---------|-----------------|-----------------|
| 1 | The U.S. | The U.S. |
| 2 | Singapore | Singapore |
| 3 | Hong Kong | Hong Kong |
| 4 | Japan | Finland |
| 5 | Denmark | The Netherlands |
| 6 | Norway | Norway |
| 7 | The Netherlands | Denmark |
| 8 | Luxembourg | Switzerland |
| 9 | Switzerland | Canada |
| 10 | Germany | New Zealand |
| 11 | New Zealand | Japan |
| 12 | Canada | The U.K. |
| 13 | Chile | Luxembourg |
| 14 | Sweden | Germany |
| 15 | Finland | Ireland |
| 16 | Austria | Malaysia |
| 17 | Belgium | Australia |
| 18 | ▲Taiwan, ROC | Sweden |
| 19 | The U.K. | Austria |
| 20 | France | France |
| 21 | Australia | Iceland |
| 22 | Ireland | Chile |
| 23 | Malaysia | Belgium |
| 24 | Israel | ▲Taiwan, ROC |
| 25 | Iceland | Spain |
| 26 | Mainland China | Israel |
| 27 | South Korea | Mainland China |
| 28 | Italy | Thailand |
| 29 | Spain | Argentina |
| 30 | Thailand | The Philippines |

Note: 1. A total of 46 countries were appraised. List here are the top 30 countries.
2. The 1997 rankings are preliminary rankings based on two thirds of the 244 indicators of IMD.

Table 1.10 The world competitiveness rankings compiled by IMD for 1996 and 1997
Source of information: *Taiwan's Commercial Times*, March, 1997.

The competitiveness rankings of Taiwan divided by category

| Category | 1996 | 1997 | Up or Down |
|---|------|------|----------------|
| 1.Overall Ranking | 8 | 24 | Down 6 Places |
| 2.Domestic Economic Power | 11 | 18 | Down 7 Places |
| 3.Degree of Internationalisation | 26 | 34 | Down 8 Places |
| 4.Government Efficiency | 6 | 22 | Down 16 Places |
| 5.Financial Power | 21 | 25 | Down 4 Places |
| 6.Infrastructure | 30 | 30 | Same place |
| 7.Corporate Management | 18 | 20 | Down 2 Places |
| 8.Hi-tech Power | 17 | 11 | Up 6 Places |
| 9.Human Resources and Quality of Living | 16 | 21 | Down 2 Places |

Table 1.11 The competitiveness rankings of Taiwan divided by category

Note: The 1997 rankings are preliminary.

Source of information: International Management and Development Institute, Laussane, Switzerland

The International Management and Development Institute in Laussane, Switzerland released its preliminary report on world's competitiveness rankings on March 25, 1997. 46 countries were appraised. Of the nine categories of appraisal of Taiwan, only the category of "Technological Power" had seen advancement in ranking, advancing from the 17th place in 1996 to the 11th place in 1997. Other categories such as "Infrastructure" had seen the ranking staying the same place, while other categories had seen a big decline.

The 1997 world's competitiveness report shows that Taiwan's best performance is in the category of "Hi-tech Power," and the worst is in the categories of "Degree of Internationalisation", whilst the category showing the biggest drop in ranking is "Government Efficiency."

Prof. Michael E. Porter of Harvard University, a famous scholar in formulating strategies for raising competitiveness, visited Taiwan in April, 1997 to look for ways to upgrade Taiwan's competitiveness. He said that the hi-tech industries are the forte of Taiwan's competitiveness, so Taiwan should transform itself into a centre of science and technology in Asia or an island of technology.

The concept of "Island of Technology" was first introduced by Mr. Stanley Shih of Acer Inc. On February 20, 1989, Mr. Shih, as advisor to the President, gave a speech entitled "The Outlook for the Development of Private High-tech Industries—Taking the World as Our Field of Play while Harboursing the Ambition to Reach the Peak in Hi-tech Technology Development" at a monthly meeting held at the Presidential Office. The following is taken from the text: "Looking into the future, the information industry has become one of our major sources of national income".

From 1990 to 1995, when the First Five-year Plan for Upgrading Image was implemented, the Ministry of Economic Affairs (MOEA), in accordance with its industrial development strategy, used the slogan "It's Very Well Made in Taiwan" to promote the international image of Taiwan-made products. The emphasis is on brand identity and product quality. From 1996 to 2000, when the Second Five-year Plan for Upgrading Image is being implemented, MOEA has used the slogan "INNOVALUE," combining INNOVATION and VALUE to give Taiwan-made products a new niche. Beginning in the year 2000, Taiwan will build itself into an island of technology.

1.2 The Development of the Manufacturing

Since the 1970s, Taiwan industry has been participating eagerly in exporting trades, and the GNP per capital has continued to rise (Figure-1.4). Among the top ten trading partners of Taiwan, United States, Japan, Hong Kong are in special situations (Table 1.4) .

Taiwan is exporting more goods to the United States than importing goods from United States. On the other hand, Taiwan is consistently importing more goods from Japan than exporting goods to Japan. Hong Kong has become an exporting transfer-port of Taiwan, especially for the goods exported to Mainland China. However, the United States, Hong Kong, Japan, Singapore, and Holland are Taiwan's top five exporting trading countries (see Table 1.5 and Figure 1.5) Among the top eight exporting commodities of Taiwan, electronic (see Table 1.8) information and telecommunications and gauze are identified being of major importance (Table 1.6 and Figure 1.6).

For the import market, Japan, United States are the major importing countries, following by Germany, Korea, and Malaysia. The top eight major importing commodities are identified as electronic, machinery and iron & steel products (Table 1.8). As a result, it can be seen that the United States, Hong Kong, and Japan are the major trading countries of Taiwan (Table-1.9).

Nowadays the most competitive edge of Taiwan is hi-tech power. (Table-1.11)
This hi-tech power is attributed to Hsinchu Science-based Industrial Park established by the government for the past twenty years to encourage research and innovation of hi-tech products.

Since the 1970's Taiwan industry has progressed through OEM production pattern, to the 1980's ODM concepts. From the 1990's Taiwan has been promoting product design and innovation to develop the OBM concept. Good product design awards and good national imaging awards are offered annually and Taiwan also hosted the ICSID conference in 1995. Taiwan has tried to raise its innovation and designing ability to a higher level.

1.2.1 The Strength of Taiwan Industry

Taiwan industry strength can be identified as follows:

- a. Hi-tech products are well established. Computers and telecommunication equipment are improving rapidly, and both products are popular in Taiwan and overseas.
- b. Taiwan industry has had successful OEM experiences with overseas companies. Taiwan can provide excellent manufacturing techniques and qualities.
- c. Well-educated population, an abundance of human resources
- d. Computer-literate, accessing global information technology easily
- e. Government and Industrial Development Bureau/ MOEA support for product innovation and designing.

1.2.2 The Weakness of Taiwan Industry

On the other hand, currently Taiwan faces several problems. The weaknesses can be identified as follows:

- a. Due to the tremendous political pressure from Mainland China, Taiwan faces problems of international recognition.
- b. Because of the increasing labour cost in Taiwan, several industrial sectors have moved their manufacturing bases to Mainland China, Vietnam, Indonesia. Several local industries in Taiwan have reduced dramatically.
- c. Due to the high labour cost, Taiwan relies heavily on importing-labour force from the Philippines, Vietnam, and Thailand. At the same time social problems of importing-labour forces are increasing.
- d. Although the living standard of Taiwan is high, the living quality is poor in comparison to European countries or United States. For the appreciation of good design products, Taiwan still needs improvement.
- e. In general Taiwan industry possesses strong manufacturing capability with good marketing strategy. But the industry still faces lack of product innovation, and overall industry remains in the OEM level.

1.3 Purpose of the Research

Taiwan Needs to Establish Its Own National Design Policy:

Since the end of World War II, Taiwan has undergone the following stages of development in upgrading design and in raising its competitiveness, both from the perspectives of the enterprise and from the perspective of the country.

The China External Trade Development Council (CETRA) established a Design Promotion Centre (DPC) in March, 1979 under the endorsement of the government to promote design as an essential tool for product competitiveness. This enabled the importance of the interaction between the design industry and the production enterprises to be recognised and implemented.

1.3.1 From the perspective of the enterprise

- a. In the 1970s, many enterprises in Taiwan were practicing a production pattern called Original Equipment Manufacturing (OEM). Within this framework companies manufactured products according to the specifications of foreign buyers and earned very little under global work division where product planning, market survey, design, production, sales, and after-sales service were executed in different areas. It is under this work division that Taiwan's enterprises had the chance to turn global in their perspectives and gradually developed production techniques.
- b. In the 1980s, Taiwan's enterprises entered the stage of Original Design Manufacturing (ODM). In this stage, they developed their own design and manufacturing. Whether the design and development of a product is by local designers or by foreign designers, Taiwan's enterprises retained the right to decide on how product design should be

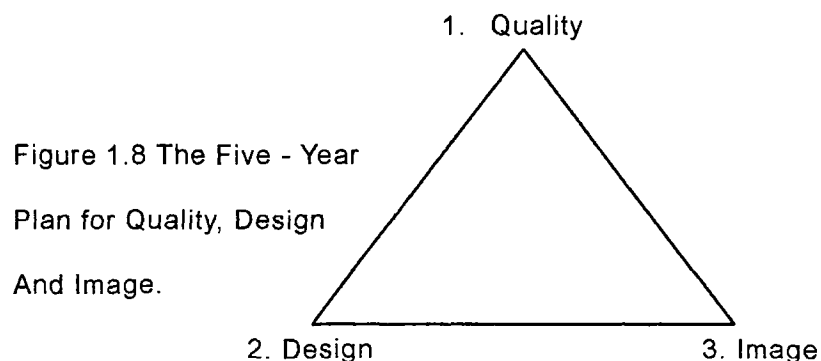
implemented.

- c. In the 1990s, Taiwan's enterprises entered the stage of Original Brand Manufacturing (OBM). In this stage, Taiwan's enterprises are building a good image for their products and enterprises, creating their own brands, and eradicating the impression of many foreigners that Made-in-Taiwan products are mostly cheap products or counterfeits.

After more than 20 years' accumulated experience in the development of business environment and product design, from the 1970s to the 1990s, Taiwan is witnessing a gradual evolution of the enterprise's design policy into the 21st century. The framework of Taiwan's national design policy can be identified from the above-mentioned different stages of development of an enterprise. Although a national design policy has not yet been established we can begin to see it taking shape.

1.3.2 From the perspective of the country

Since 1988, Taiwan's Ministry of Economic Affairs has executed three five-year plans for upgrading product quality, design, and image in concern with the country's economic and trade environment, international trends, and the growth of the enterprise and its needs.



| | |
|---------------------------------------|--------------------|
| First 5 Year Plan to Upgrade Quality | from 1988 to 1993. |
| Second 5 Year Plan to Upgrade Quality | from 1993 to 1998 |
| Third 5 Year Plan to Upgrade Quality | from 1998 to 2003. |
| First 5 Year Plan to Upgrade Design | from 1989 to 1994. |
| Second 5 Year Plan to Upgrade Design | from 1994 to 1999. |
| Third 5 Year Plan to Upgrade Design | from 1999 to 2004. |
| First 5 Year Plan to Upgrade Image | from 1990 to 1995. |
| Second 5 Year Plan to Upgrade Image | from 1995 to 2000. |
| Third 5 Year Plan to Upgrade Image | from 2000 to 2005. |

The Five-year Plan for Upgrading Quality looks into the management of an enterprise and the production process of a factory to encourage the enterprise to raise product quality.

The Five-year Plan for Upgrading Image encourages the enterprise to consistently develop innovative and competitive products on the international marketplace, placing emphasis on ownership of its own brands, creative design, high quality, and good marketing.

To encourage the enterprise to draw up a comprehensive strategic plan on product design, the government has sponsored the formulation of the Five-year Plan for Upgrading Design, which stresses planning and research, designers' training, design counseling, and publicity campaigns. This plan is still being executed and represents the close relationship between applying design techniques and upgrading Taiwan's competitiveness. The government is placing high emphasis on using design as a tool for raising Taiwan's competitiveness. In addition, after 20 years of promoting the importance of design, the Design Promotion Centre (under CETRA) has begun to see some good results. These are the main reasons why Taiwan's national design policy has gradually come to shape. And also the reason why Taiwan needs to have a national design policy tailored to its needs.

1.3.3 The Definition of a National Design Policy

Taiwan has progressed from its OEM period in the 1970's to the current ODM and OBM, and the government is currently implementing three different five-year plans for promoting quality, design and image. Thus a national design policy has also begun to take shape in Taiwan. After 20 years of hard work, the international design community has also begun to take notice of its potential and Taiwan needs to establish its national design policy and design strategies.

How should Taiwan approach the problem of establishing a long-term design policy? First of all the policy formulators should take a good look the definition of the words 'national design policy'. The following definition is based on the authors experience at the heart of Taiwan design and is formulated as a hypothesis for later testing:

A national design policy is formulated to upgrade the level of product quality, design and image in order to raise the level of industrial competitiveness, improve the living conditions of it's citizens and enrich its cultural life to create a highly civilised society. A national design policy is usually formulated by a country's industrial, economic or trade authorities in charge and then entrusted to a design promotion organisation to draw up and implement the projects.

Therefore, a national design policy is usually led by a government with various educational, trade, service and industrial organisations to carry out various assignments.

1.3.4 A Global Overview of a National Design Policy

In 1944, the British government established the Design Council to help its industries upgrade product design and to upgrade the level of product quality and image in order to raise the level of industrial competitiveness and improve the living conditions of its citizens. In order to create a knowledge driven economy, the bureau of trade and industry announced a annual report of competitiveness in 1999. In his pre-budget report, Mr. Gordon Brown, the Minister of Economic Affairs has also listed the improvement of the competitiveness of British products as a main objective.

The German Design Council (Rat für Formgebung) is the only federal government agency responsible for design promotion on a national level. In general, design promotion in Germany began after World War Two, when Germany began its economic realignment. The objective then was to reinvigorate the industry and trade, regain international competitiveness, and publicise new design techniques.

According to a recent investigation by the German Design Council, there are over 750 design units in Germany. These units include government agencies and departments, foundations, cultural and professional associations, chambers of commerce, universities, centres of technological transfer, libraries, competitions, periodicals, museums, and archives. Every unit will have more or less effects in the promotion of design. If judged in traditional terms, there are 13 design centres in Germany in addition to the German Design Council.

Although the Italian government has never had any type of national design policy, the Associazione Disegno Industriale (ADI - the Italian Industrial Designer's Association) has played an important role in the promotion of design and a public awareness of how design affects society.

As for the United States, the lack of government support is the reason why the U.S. still has not established its national design policy till this day. However, throughout the active promotion of designers, the U.S. still has exerted its

influence on the global design arena as far as U.S. design strategies and practices are concerned.

In 1972, the Nixon Administration implemented the Federal Design Improvement Program under the National Endowment for the Arts. Under this programme, only the best design should be applied in federal programmes. The National Endowment for the Arts then received instructions to coordinate all agencies concerned to improve design quality of various federal projects.

In 1993, Clinton became U.S. president. At that time U.S products met with strong competition on world markets and lost battle after battle. The Clinton Administration held the view that national competitiveness should be strengthened. As a result, the value of design was reevaluated. The National Endowment for the Arts sponsored a international design seminar in June, 1993. The topic of the seminar is: Harnessing the Power of Design: Directions for the Future. Participants included influential figures from industry, government, enterprise, and educational circles and the media. They discussed the establishment of a design promotion organisation in the U.S. to integrate all design forces. Executives from the Design Promotion Centre under China External Trade Development Council, the British Design Council, the Nagoya international Design Centre, the Danish Design Centre, and the Barcelona Design Centre were also invited to attend the seminar and share their experience. During the three-day discussion, participants suggested that the U.S. government should establish a design agency responsible for design

development in order to raise industrial competitiveness.

Britain was the first country in Europe to improve its industrial competitiveness through design, with the British Design Council as the executor of the plan while Germany relied on its RfF (Rat fur Formgebung) and several design centres such as: Hamburg Design Centre, Stuttgart Design Centre etc. Spain has the Madrid Design Centre as the main executor with the support of its government and local design centres in Madrid and Barcelona. Both Denmark and Sweden also have government supported design centers.

In Asia, Japan is the country that has invested the most in design.

After World War II the Japanese government included design in the long-term promotion plan. In order to avoid to being labelled as a producer of cheap products , the Japanese established the Good Design Selection System to award new design products. The new design products must go through a selection to get the G mark to be able to export to foreign countries.

Regarding design promotion, the Japanese government divided the task between central government and local government. The highest executive office in Japan is the Inspection & Design Policy Office, affiliated to the Ministry of International Trade and Industry, and is in charge of managing design policy and integrating design promotion. Japan Industrial Design Promotion Organisation and Japan Design Foundation are the actual policy promoters. Apart from these

two central organizations, there are also Industrial Designers Associations, Graphic Designers Associations and other professional associations.

In 1988, The Export Trade Inspection & Design Promoting Council of the Ministry of International Trade and Industry drew up a report for the government titled "Design Strategy for the 90's". When the report was released, the Japanese government put in a lot of effort to promote a National Design Policy and announced 1989 as "Year of Design" They also held the ICSID Congress and World Design Exhibition in the same year which became the largest event in the history. Japan regarded the design centres as being qualified to have sponsorship from the government and have the tax- free favour through an organisation called Pan-Pacific Cooperation. The Japanese government decided that it would need a broader and more tangible design strategy to confront future needs.

Korea has also been very active in the recent years in promoting design to improve its product quality. They have also established an organisation to promote and manage design on a national level and have actively searched for designers both at home and abroad.

It can be seen from the above that most industrialised countries - besides the US and Italy - all have some sort of national design policy. Both the British government and the Japanese government leaders plan and promote their national design policy through a higher institution in the government. They then

authorise their trade and industry departments to take over the project with the objective of improving trade and product competitiveness.

In order to develop international trade, and promote national industrial competitiveness, Design Promotion Centre of CETRA supported by The Ministry of Economics Affairs was founded in March 1979, and invited Paul Y.J. Cheng from Tatung Co., to plan a design promotion centre under the China External Trade and Development Council.

The Design Promotion Centre established a G-mark (Good Design) System in 1980, and was accepted into ICSID in 1985 and participated in the World Design exhibition in Washington DC. After taking part in ICSID 89 Nagoya in 1989, obtained the honour to host the 1995 conference in Taipei.

The assistance of the government has been very beneficial for the development of design in Taiwan. Design is crucial to the competitiveness of a nation's products on the international market, especially for an island country like Taiwan where exportation is crucial to its survival.

It can be seen that establishing a long-term design policy is very important to the industrial competitiveness and the quality of life of the citizens of Taiwan. It is evident from the experiences and development history of other countries in America and Europe that establishing a national design policy is the road that Taiwan shall also take for its future survival.

1.3.5 Relationship between policy and strategy

The definition of “ policy” is “principle or guideline for implementation”. For a group (or a country) to achieve a goal or objective it must plan such principles or guidelines. This becomes the policy.

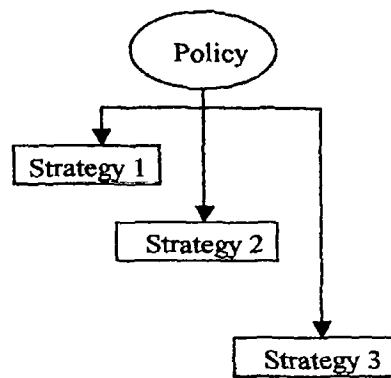
The “strategy” means ‘implementing the methodology”. For achieving a group’s (or a country’s) policy, some methods are planned. Implementing those methods means strategy.

Furthermore, each enterprise has its own design policy, and each country should have its own national design policy. For the implementation of the policy, one can plan different strategies for each implementing methodology (Figure-1.9).

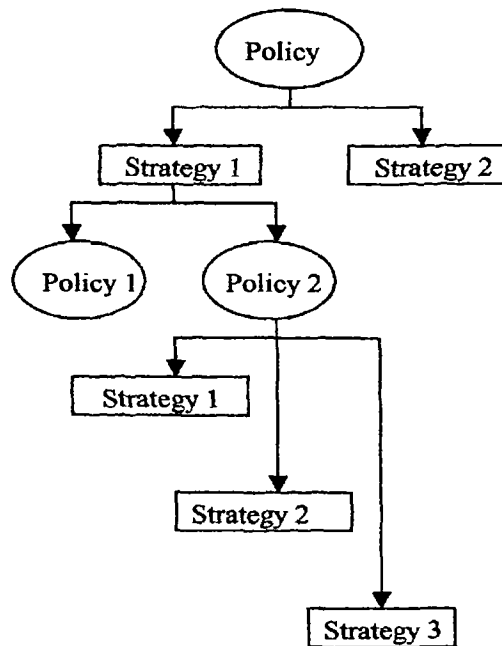
Sometimes for the efficiency of the implementation methodology, it is necessary to plan several resolving solutions. (Also called subdivided policy) Aiming for such policy, one can provide more solving methods. (Also called subdivided strategy) (Figure-1.10).

One can conclude that policy and strategy are interactive. For example, in Taiwan, in order to raise the international competitiveness of the industry, government cultivates and trains design personnel. At MOEA, raising the design

quality and image is the main goal to be achieved. This main goal can be viewed as the “policy” of the Taiwan government. For implementation of this policy, improved “quality”, “design”, and “image” are the objectives of the three five-year plans. Each five-year plan requires the implementing methodology. (or “strategy”) For the efficiency of these plans, one can explain each plan to be as a policy. Several resolving methods are provided such as 1) promoting design 2) guiding product design 3) training personnel 4) promoting industry. Each of those methods is the “strategy”. This represents the relationship between policy and strategy.



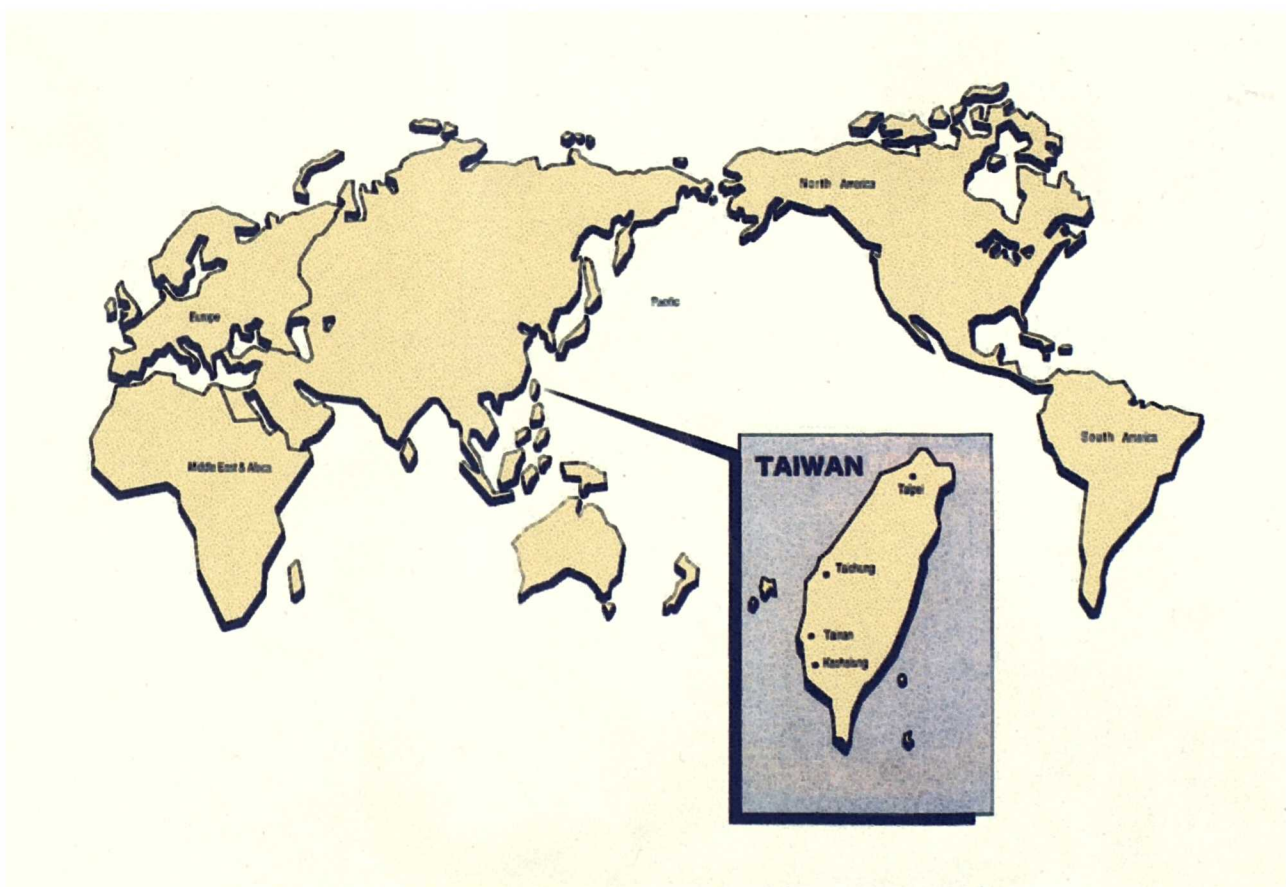
(Figure 1.9) Relationship between policy and strategy (1)



(Figure 1.10) Relationship between policy and strategy (2)

A model for the strategic implementation of design policy in Taiwan

Chapter 2 Research Methodology



A model for the strategic implementation of design policy in Taiwan

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Chapter 2 Research Methodology

2.1 Overview

Motivation of the research

Industrial Design in Taiwan was initiated in 1961. The concept of design, when first introduced to Taiwan during that time, was mainly from Europe, U.S.A and Japan.

From 1979 to 1989, Industrial Design in Taiwan made its way into the age of internationalisation. In 1988, the Ministry of Economic Affairs (MOEA) earmarked US\$ 170 million in total for three five-year plans, which respectively aimed at developing Industrial Design in Taiwan and improving both image and quality of products made in Taiwan.

Although there has been great potential for Taiwan to create its own design policy, as a matter of fact, Taiwan does not have a concrete and executive national design policy until now. However, with the precise direction and support, which promotes by Taiwan's government, IDB-Industrial Development Bureau of MOEA, it would be the optimum opportunity to establish the national design policy, and propose a model for the strategic implementation of design policy in Taiwan.

Aim of the research

The main aim of the study is to investigate both global and Taiwanese design strategies in order to propose a model for the strategic implementation of design policy in Taiwan.

Objectives of the research and Framework

- To investigate and analyse the principal features of design policy in Taiwan, North America, Europe and Asia
- To undertake surveys of design strategic implementation in Taiwan.
- To analyse and evaluate the findings of the study and formulate a new model.
- To test and evaluate the new model. To discuss the findings of the new model with key decision makers or those who have a great influence on Taiwan's design policy.
- To identify and present a final model with recommendations, based on the aim and objectives, defined within the frame of research.

Research Methods

According to the framework of design research, research methods are as follows:

(i) Comparative study

To collect the data from key areas (8 countries) of the world, Taiwan, USA, Canada. UK, Germany, Italy, Japan and Korea.

(ii) Survey in Taiwan

(iii) Formulate a new model

(iv) Evaluation

(v) Final model

(vi) Conclusion

Literature Review- Comparative study

Focus on Taiwan with a brief study of USA, Canada, UK, Germany, Italy, Japan and Korea.

Taiwan

Taiwan's industrial design efforts started in the decade of the 1960's. In 1970, the China Productivity and Trade Centre (CPTC) underwent a reorganisation under the instruction of the Ministry of Economic Affairs (MOEA). Its trade promotion function was taken over by the China External Trade Development Council (CETRA). CPTC has since been renamed the China Productivity Centre (CPC). The China External Trade Development Council, or CETRA, was established in 1970. Since its foundation, the China External Trade Development Council integrated its efforts with 43 overseas offices worldwide and ten domestic departments.

Design Promotion Centre / CETRA-

Taiwan's national design promotion organisation since 1979

The department was placed in charge of offering professional guidance to industries in their product and packaging design and of assisting manufacturers in establishing their own brands. The founder and author of this thesis was also the managing director is Paul Y. J. Cheng. The Industrial Design Promotion Department was expanded in 1990 and renamed the Design Promotion Centre, or DPC/CETRA.

The Promotion of Design Globalization

The most significant activities were those of the International Council of Societies of Industrial Design, or ICSID. The International Council of Societies of Industrial Design is a non-profit industrial design promotion organisation. Founded in 1957 in London by a group of European designers with high ideals, the council established its initial headquarters in Paris. In 1974, its headquarters was moved to Brussels. During the General Assembly Meeting held in Washington, D.C. in 1985, a resolution was carried to establish the organisation's headquarters in Helsinki, Finland. Its goals include the promotion of industrial design, bringing welfare to the human race, providing assistance to industries in design development and upgrading, and in the creation of a harmonious, comfortable living environment for all people.

When the 1989 ICSID Congress was held in Nagoya, Japan, Taiwan formally submitted a bid to host the 1995 Congress. Other countries competing for this honour were Germany and Australia. In 1992, during the 17th ICSID Design Congress held in the former Yugoslavia, the congress delegates voted in favour of Taiwan to host the 1995 ICSID Congress. From then on, CETRA, with support from the government and local industrial sector, design circles and design academia, started preparatory work for Taipei's hosting of the event in 1995.

The ICSID Design Congress held in September 1995 in Taipei was the result of Taiwan's efforts to promote design internationalisation over the years and proof of the achievements we have made. The Congress attracted almost 1,000 representatives of industry, academia and governments from more than 30 countries around the world. It marked the start of a new era in the development of design in Taiwan.

**It's Economy, Industry and Design with Reference to the Global Trading Situation : The Ever-changing Production Patterns---
from Original Equipment Manufacturing (OEM) to Original Design Manufacturing (ODM) to Original Brand Manufacturing (OBM)**

a. The 1970s and Early 1980s – OEM

Over the years, Taiwan has also experienced different production patterns. Particularly in the 1970s and early '80s, foreign buyers often brought in samples designed abroad and requested local manufacturers to produce them accordingly. This system is known as Original Equipment Manufacturing (OEM). At that time, although Taiwan acquired a considerable amount of manufacturing know-how, it still lacked original designs.

b. The 1980s – ODM

DPC/CETRA worked closely with the government, design institutions, designers and manufacturers to promote original design in manufacturing. As a result, industry gradually shifted its production pattern from the OEM system to the ODM (Original Design Manufacturing) system.

c. The 1990s—OBM

The government has encouraged industry to establish Taiwanese manufacturer's own brand names.

The first Five - year plans for upgrading Design (1989~1994)

The Second Five - year Plan for Upgrading Design (1994~1999)

The Third Five – year Plan for Upgrading Design (1999~2004)

a. The plan's four major areas of work are: (the first phase):

(1) Training

(2) Product Development and Consultancy

(3) Research and Development

(4) Promotion

**b. The Taipei Design Centres (TDS's) in Dusseldorf, Milan, Osaka,
Paris and San Francisco**

CETRA established the Taipei Design Centres (TDC's) under this project. The centres are located in Dusseldorf, Milan and Osaka, established respectively in 1992, 1993 and 1994, another one established in San Francisco by the end of 1999.

**The second Phase of the Five- year Plan for Upgrading
Industrial Design (1994~1999)**

The goals of the five- year Plan for upgrading Product Design (the second phase):

- A. Assisting manufacturers to develop products of good design, and improving manufacturers' ability to develop their own products
- B. Conducting design information research and development, and assisting manufacturers with the application of core design techniques
- C. Establishing design information networks, and providing manufacturers with all- encompassing design information

This will place more emphasis on the integration and management of different plans and programmes, bringing into full play the power of a combined total force.

U.S.A.

After the II world war, USA become a superior great economic and trade country. Even the U.S. still had not established its national design policy at this stage.

However, throughout the active promotion of designers, the U.S. has exerted its influence on the global design arena where U.S. design strategies and practices are concerned. Design in the United States, is provided by the IDSA, (Industrial Design Societies of America), and the NEA (National Endowment for the ARTS), the latter being the main power and also the most important organisation in the United States. The National Endowment for the Arts, (NEA) an independent agency of the Federal Government, was created in 1965 to encourage and assist the nation's cultural resources.

Canada

1967, the year of Canada's 100th birthday and Expo 67 in Montreal, was a high point for design in Canada. Though the 1970s and 80's were periods of rapid growth in Canada, few policy-makers were concerned about the future of Canadian industries.

The DX organisation in Canada is a government established design promotion agency. Canada was able to host the 1997 ICSID conference with the support of the Mayor of Toronto. The DX organisation used to be one of Canada's largest supporters of using design as a means of improving trade competitiveness.

UK

The United Kingdom is the first country to establish a Design Council in the world, hence UK design policy influences the other countries. The British Design council was founded in 1944. The United Kingdom is the place of origin of the world's design concepts and philosophy.

The following are the major tasks of the Design Council:

- a. Design for competitiveness
- b. Design in decision making
- c. Design in small and medium enterprises
- d. Design and investment
- e. Design and Education
- f. Design for international markets
- g. Design for environmental sustainability
- l. Business Link

The major purpose is to serve small and medium sized businesses. Business Link is the national network of local partnerships between the business community and government, providing the simplest route for all small and medium sized business to access the best information and advice to help manufacturers and business grow.

Germany

There are over 750 design units in Germany. These units include government agencies and departments, foundations, cultural and professional associations, chambers of commerce, universities, centers of technological transfer, libraries, museums, and archives. There are 13 design centres in Germany in addition to the German Design Council. In every state there are design centres.

The German Design council (Rat für Formgebung) is the national representative body for the promotion of design in Germany. It is a non-profit making foundation inaugurated in 1953 on the basis of a resolution of the German Parliament. The German Design Council is also funded by the federal Minister for Economic Affairs, the Minister for Economic Affairs of the State of Hesse, and the City of Frankfurt.

Italy

Italian creativity has been recognised since the Italian Renaissance. This creative tradition has had a great influence on fine arts, architecture and modern design and fashion. Italian creativity and practicality can be seen especially in everyday objects such as furniture, lighting, gift & stationary items, transportation vehicles, apparel, jewelry and leather items. Leonardo da Vinci is considered to be the father of Italian design.

Italy has no official or national design policy and no design centre. However, ADI – The Italian association for Industrial Design – is the most important design organisation in Italy.

Japan

After having hosted the Design Congress of the ICSID in Kyoto 1973, the global design world started to notice Japan and Asia. Until 1989 the worldwide design congress was held in Nagoya, including seminars and exhibitions. The Japanese national design policy was established in 1990, and subsequently refined to be completed in 1997. It aims to disseminate and execute the policies from MITI- The Ministry of International Trade and Industry.

Korea

MOTIE, the Ministry of Industry & Energy of Korean government, has played an important role in establishing domestic design strategies and policy. In recognition of the importance of design, MOTIE of Korea established the "Design Policy Division" as a branch of the central government to take charge of organised and comprehensive design promotion policy. This new division will support design development based on a "Five year Design Development Plan". After a review and competitive study of the eight countries the findings are analysed and the current situation regarding worldwide national design policies presented. In conclusion, results are presented in a table according to the following criteria:

- a. Design Organisation(Association or Design centre)
- b. Organisation Supported
- c. Joining Int'l Design Association
- d. Design Award
- e. National Design policy
- f. Design Policy---Strategic Development & Implementation

Surveys in Taiwan

The objectives of this survey are :

- To understand the problems facing “the industries in product design and development”, placement of design talents, corporate management and market competition, and to find out in what way the government can help them.
- To understand the problems facing managers of “design companies” when introducing design concept to their clients, *including manufacturers and the government*, as well as their countermeasures.
- To understand the problems facing scholars at “ design educational institutes” in curriculum planning and teaching, and to find out whether the talents in which they trained are meeting the requirement of corporations and the nation as a whole.
- To understand the experience and future practice of “the government” in promoting design.

Targets of the survey and Questionnaire :

The subjects of the survey and Questionnaire Contains 4 main categories:

- Domestic manufacturers
- Design companies
- Design educational institutes
- Government agencies and relevant organisations in charge of design promotion

Analysis of Findings :

Expected and actual result of the questionnaire

| Subject | Samples delivered | Expected number of return samples | Actual number of returned samples | Return rate (compared with expectation) | Return rate (compared with delivered samples) |
|----------------|--------------------------|--|--|--|--|
| Total | 334 | 110 | 95 | 86% | 28% |

After analysis of the questionnaire, the results are categorised as follows:

- Manufacturers
- Design Companies
- Scholars
- Government Agencies and Relevant Organisations

Evaluation of Findings

SWOT analyses

According to the findings from the literature review, the comparative study in chapter 3, and the analysis In chapter 4, the strengths, weaknesses, opportunities and threats (SWOT) of the manufacturing circles, design companies and design education institutes in Taiwan are presented.

Arguments – Issue – Conflict

Dependent on the findings from the literature review, the comparative study in chapter 3, and the Questionnaire and Analysis of findings in chapter 4, interesting arguments among the manufacturing, design companies, design education institutes, government bodies and specific legal entity unit (CETRA, CPC, CIDA) etc are presented.

A comparison chart of Taiwan and various national design policies:

According to a study in Chapter 3 – Literature review – Comparative Study it is concluded that the various national design policies can be divided in to three categories as follows:

| | | |
|----|--|----------------------|
| 1. | Clear national design policy already established. | UK, Germany & Japan. |
| 2. | Government supports various design-related activities and under construction of a national design policy. | Taiwan & Korea |
| 3. | Government does not yet establish a national design policy, however, Government already supports some design related activities) | USA, Canada & Italy |

Flow chart of execution of the design plan in Taiwan.

The SWOT analysis (the strengths. Weaknesses. Opportunities and threats) enables the situation between the Government and Design executioners to be presented.

Organisations that execute design policy in Taiwan

| | |
|---|---|
| 1 | <p>(1) Remain as it is. Maintain the status quo: DPC/CETRA is currently appointed to implement IDB's "5-year plan for upgrading design"</p> <p>(2) Establish a specific legal entity unit responsible for executing and assisting in the design plans.</p> <p>(3) Establish a National design Centre : Shall have an independent administration to ensure promotion of design to the entire nation.</p> |
| 2 | <p>Establish a National good design display centre or National Design Museum.</p> <p>A design display centre will display Taiwanese and global good design and have an educational purpose.</p> |

| | |
|---|---|
| 3 | <p>Establish Taiwan Design Centres overseas:</p> <p>(1) Serve as an overseas liaison and assist in using these overseas design centres.</p> <p>(2) Supported by IDB, Taiwan has already established design centres in Dusseldorf, Milan, Osaka and a fashion design centre in Paris. Another design centre in San Francisco established in 1999</p> |
|---|---|

Development of the new model

Depending on the evaluation by means of (i) the SWOT analyses, (ii) Arguments – Issue – Conflict, and (iii) a comparison chart of Taiwan and various national design policies, a proposal for the New Model of Design Policy in Taiwan will be made.

Formulation of the New Model

“Organisation Structure” including :

- Government and Design Policy
- The planning and implementation unit of the policy and Design strategy.
- The implementation and cooperation unit for Taiwan’s northern Central and southern area.
- Unit for other functions.

Key points for strategy and implementation of the new model of

Design policy in Taiwan.

Evaluation : testing of the new model of the design policy in Taiwan

The purpose of testing :

To test the results of the research :

“Proposal of the new model of design policy in Taiwan

-- Formulation of the new model : Organisation Structure (Ref. Chapter 6)

-- Key points for strategy and implementation (Ref. 6.2 of Chapter 6)”

The potential and future prospects of the model requires another advanced interview to obtain the most suitable model.

The interviewees and methods of interview

According to Taiwan's implementation and design of the 5- year plan and planning of the national design policy, the most influential people including government personal, legal entities unit, manufacturers, design companies and design education institutes, for a total of 8 people, are identified and interviewed by questionnaires:

Results . Evaluation and conclusions.

Conclusions – bring together main features of the evaluation interviews to identify those points which can be incorporated into the final model;

Conclusion:

Final Model

Review of aim

How to assess effectiveness

Recommendation for :

1. Taiwan manufacturing Circles
2. Design Company
3. Design Education Institutes
4. Government Agencies

Suggestions for Further research

Finale : Current and past situation identified during the research work

2.2 Motivation of the research

The concept of Industrial Design was first introduced in Taiwan in 1961, mainly from Europe, U.S.A and Japan. However, the developmental period of Industrial Design in Taiwan has not been given a lot of importance and attention until the China External Trade Development Council, Taiwan (CETRA) established the Design Promotion Centre, Taiwan (DPC) in 1979.

From 1979 to 1989, Industrial Design in Taiwan made its way into the age of internationalisation. In 1988, the Ministry of Economic Affairs (MOEA) earmarked US\$ 170 million in total for three five-year plans, which respectively aimed to develop Industrial Design in Taiwan and improve both the image and quality of products made in Taiwan. MOEA selected DPC/CETRA as the major organisation to implement the three plans. These three five-year plans have been successful in mapping out cooperative relations among government, industry and academia.

Although there has been great potential for Taiwan to create its own design policy, Taiwan has not had a concrete and executive national design policy until now. However, with the precise direction and support, promoted by Taiwan's government, IDB-Industrial Development Bureau of MOEA, it provides the optimum opportunity to establish the national design policy.

This study on Taiwan's design policy attempts to analyse the development of the country's design strategies by gaining better understanding of government

policies and the needs of industries and design sectors (Education, Profession and Promotion). This survey is an important task, and the results will be useful to those who believe that design is a key point of economic, social and cultural development.

2.3 Aim of the research

The main aim of the study is to investigate and compare both global and Taiwanese design strategies in order to propose a new model for the strategic implementation of design policy in Taiwan.

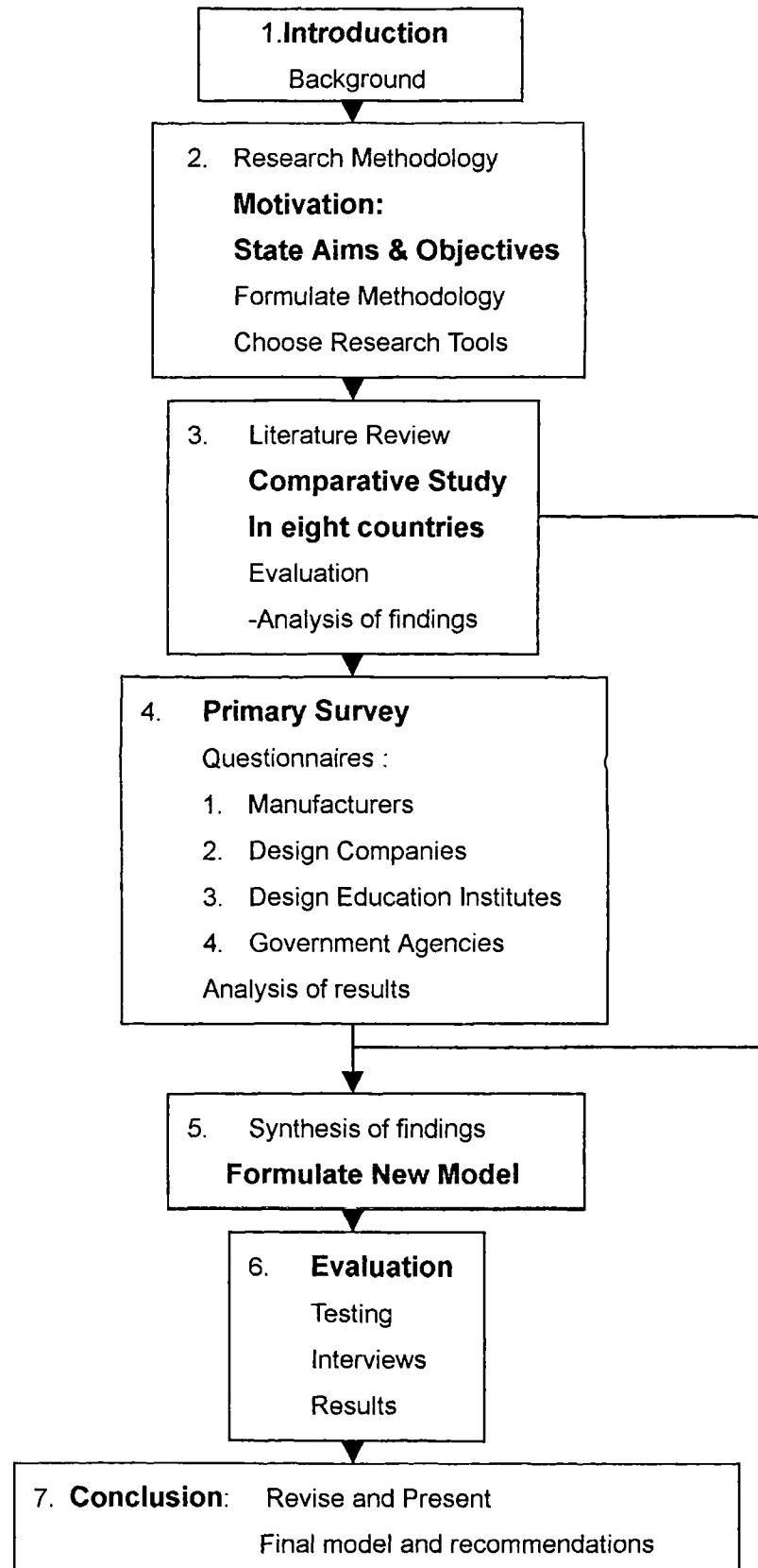
2.4 Objectives of the research

- 2.4.1 To investigate, analyse and compare the principal features of design policy in Taiwan, North America, Europe and Asia
- 2.4.2 To conduct surveys of design strategic implementation in Taiwan.
- 2.4.3 To analyse and evaluate the findings of the study and formulate a new model.
- 2.4.4 To test and evaluate the new model.
- 2.4.5 To identify and present a final model with recommendations.

2.5 Research Framework

Based on the aim and objectives, the frame of research can be defined as follows

(Figure 2.1 Research Framework):



2.6 Research Methods

According to the framework of design research, the key points of the approach & research methods are as follows:

2.6.1 Literature Review - Comparative study in eight countries

To collect the data and identify the key issues from around the world,

Including:

1. Taiwan
2. America (USA & Canada)
3. Europe (U.K, Germany, Italy)
4. Asia (Japan, Korea);

To observe their design policies and to evaluate their strength (advantageous policies and the way that they have been implemented) (objective 1)

- Why did you choose these countries?
- Why were others left out?

The comparative study represents an opportunity to introduce new thinking from other countries and make a comparative study with Taiwan.

2.6.2 Survey in Taiwan

Using the primary issues which emerged from the Literature research we design the questionnaire based on design philosophy and strategic implementation. The importance of the industry-concerned authorities and design academia that cooperated with the government for the five-year plan is emphasised. (objective 2)

The questionnaire survey was chosen as the most appropriate method to consult widely with the interested parties on a broad and complex range of issues.

a. The purposes of this survey are :

- To understand the problems facing “the industries in product design and development”, placement of design talents, corporate management and market competition, and to find out in what way the government can help them.
- To understand the problems facing managers of “design companies” when introducing design concept to their clients, including manufacturers and the government, as well as their countermeasures.
- To understand the problems facing scholars at “ design educational institutes” in curriculum planning and teaching, and to find out whether the talents they trained are meeting the requirement of corporations and the nation as a whole.
- To understand the experience and future practice of “the government” in promoting design.

b. Targets of the survey and Questionnaire :

The subjects of the survey and Questionnaire Contains 4 main categories:

- Domestic manufacturers
- Design companies
- Design educational institutes
- Government agencies and relevant organisations in charge of design promotion

2.6.3 Evaluation of Findings

a. SWOT analyses and Arguments – Issue – Conflict.

According to the findings from the literature review and comparative study and the analysis, we shall conclude the strengths, weaknesses, opportunities and threats (SWOT) of the manufacturing circles, design companies and design education institutes in Taiwan can be derived.

Interesting arguments among the manufacturing, design companies, design education institutes, government bodies and specific legal entity unit etc. can also be identified.

b. A comparison chart of Taiwan and various national design policies:

According to a study – Literature review – Comparative Study it is concluded that the various national design policies can be divided in to some categories.

2.6.4 Development of the new model

Depending on the Evaluation ((i) SWOT analyses (ii) Arguments – Issue – Conflict and (iii) A comparison chart of Taiwan and various national design policies, a proposal of the New Model of Design Policy in Taiwan will be established (objective 3).

a. Formulation of the New Model

“Organisation Structure”

**b. Key points for strategy and implementation of the new model of
Design policy in Taiwan**

2.6.5 Evaluation : testing of the new model (objective 4)

a. The purpose of testing :

To test the result of the research :

“Proposal of the new model of design policy in Taiwan

--Formulation of the new model : Organisation Structure

--Key points for strategy and implementation

The potential and future prospects of the model require another advanced interview to obtain the most suitable model.

b. The interviewees and methods of interview

According to Taiwan's implementation and design of the 5- year plan and planning of the national design policy, the most influential people including government personnel, legal entities unit, manufacturers, design companies and design education institutes, for a total of 8 people, are identified and interviewed by questionnaires:

c. Testing method

Step1: To set up a framework of a new model with key points of Taiwan's
Design policy.

Step2: To test by means of structured interviews. Examine the results of the test by discussing with the related government officers individually, managers of design companies & industries and design educators, in order to have preciseness of response and practicability.

Step3: To analyse and evaluate the results of the test.

d. Results, Evaluation and Conclusions

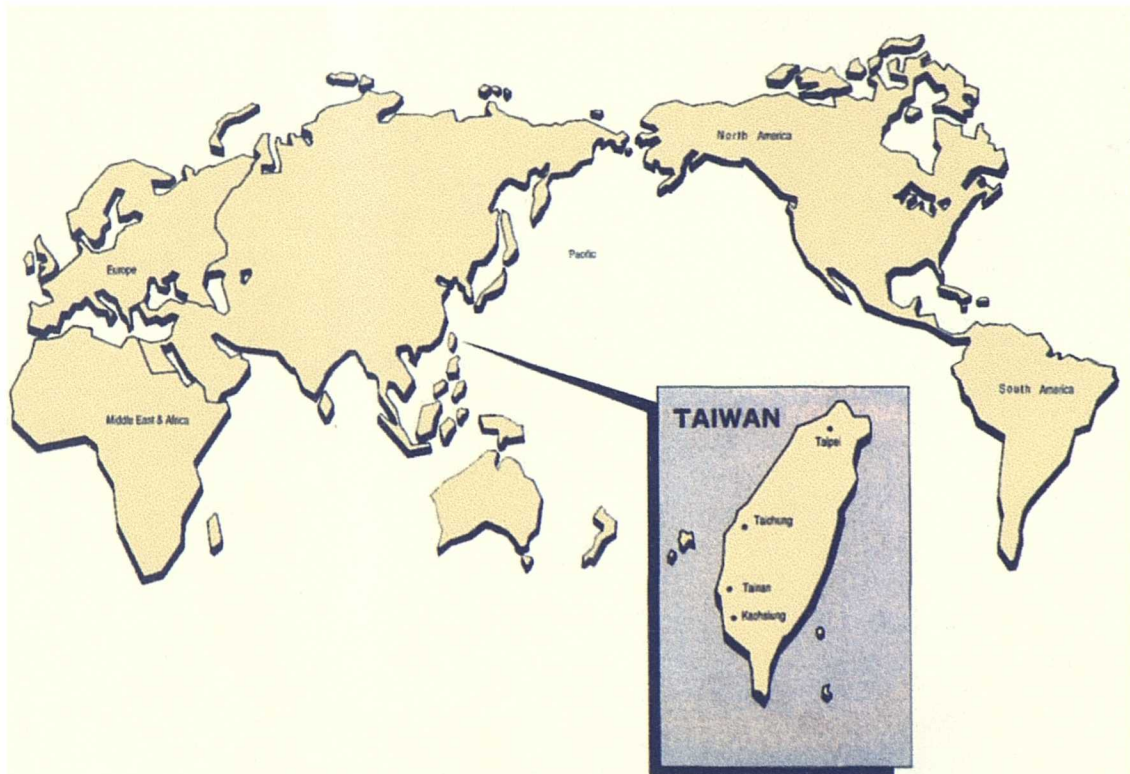
Conclusions – bring together the main features of the interviews for evaluation and identification of relevant points for incorporation into the final model;

2.6.6 Conclusion— To draw conclusions and future directions from the evaluation;

- a. Establish the Final Model**
- b. Review of aim**
- c. How to assess effectiveness**
- d. Recommendation to the key sectors**
 - *Governmental agencies.*
 - *Design companies.*
 - *Industries.*
 - *Design education.(objective 5)*
- e. Suggestions for Further research**
- f. Finale : Current and past situation identified during the research work**

A model for the strategic implementation of design policy in Taiwan

Chapter 3 Literature Review - Comparative Study



A model for the strategic implementation of design policy in Taiwan

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Chapter 3 Literature Review - Comparative Study

3.1 Introduction

3.1.1 The source of literature and information :

A "National Design Policy" is a policy established for improving the economy of a nation, assist its industries and the quality of life of its inhabitants through overall design awareness, more competitive and well designed products and improved environment. This is usually achieved through the foundation of a government organisation or contracting one or more private organisations to be responsible for planning and carrying out these policies. Furthermore, in the context of this thesis, a "National Design Policy" shall be planned for or supported by a government.

While analysing and reviewing the materials for this thesis "National Design Policy in Taiwan" it was discovered that many articles focused on design concepts, technologies, and design management while very few of them touch upon the topic of a national design policy and there were no books, which focus on this topic.

Articles concerning national design policies are usually annual reviews of some national policy, specialised publications, or papers from seminars or conferences.

For this comparative study, the Author's main sources of information were from seminars, conferences and annual reports from the following countries or organisations:

- **ICSID** : The proceeding of seminars or conferences, and of the
bi-annual international Design Congress .

- **Europe American and Asia** : The reports and annual reviews and / or reports of seminars and exhibitions.
- **National Design organisations and Government agencies** :

For example :

UK : British Design Council and The Department of Trade and industry.

Germany : The Germany Design Council (Rat Fur Formgebung) and the Federal Ministry for Economic Affairs.

Italy : ADI (The Italian Design Association) and information related to their Design Awards at Exhibitions.

Canada : DX (Design Exchange), the national design organisation for Canada.

USA : NEA (National Endowment for the Arts) and the Industrial Design Societies of American.

Japan : JIDPO (Japan Industrial Design Promotion Organisation) and The Department of MITI (Ministry of international Trade and Industry) Japan.

Korea : The Ministry of Trade, Industry and Energy.

Taiwan : CETRA and IDB / MOEA.

Collectively, the information was sufficient to illustrate the evolution of the function of the design organisation and the history of design development in each country.

1. The history of industrial design found its roots in the Italian Renaissance and started to take shape during the British industrial revolution. The Arts and Crafts movement in the UK from 1850 to 1900 continued throughout the French Art Nouveau (1890-1905) to the German DWB – Deutscher Werkbund

in 1907, British DIA – Design and Industries Association in 1915, the German Bauhaus in 1919 until the foundation of New Bauhaus in Ulm Germany and Chicago, USA in 1939.

The British founded DRU – Design Research Unit in 1943, Design Council in 1944 and D&AD – Designers and Art Directors Association in 1962. Although the German DWB and Bauhaus are known internationally for their influence on design, it was Britain's Design Council founded in 1944 that pioneered a complete and logical discussion on a national design policy (**HOLLIS 1996**).

2. After the 1989 ICSID congress held in Nagoya, Japan became aware that an emphasis on design can be very influential on developing local economies and went on to establish its successful national design policy in 1990 (**CHENG 1997**).

Reviewing national design policy from a historical point of view, the two points mentioned above become evident.

In this study the author focused on Taiwan with comparative overviews of several other countries: USA, Canada, UK, Germany, Italy, Japan, Korea.

3.1.2 Why chose USA , Canada , UK , Germany and Italy, Japan and Korea

Reasons for choosing these countries are described in the following:

1) USA

Although the USA does not yet have a national design policy, it is Taiwan's biggest trading partner and has a great influence on the rest of the world.

The ten largest international trading partners of Taiwan in the year 1999 are listed below:

1) USA, 2) Japan, 3) Hong Kong, 4) Germany, 5) Singapore, 6) Korea,
7) Malaysia, 8) France, 9) The Netherlands and 10) UK

**(Import & Export Statistics Report, The Minister of Finance,
Taiwan, 1997)**

2) Canada

Although Canada is not currently one of Taiwan's top ten trading partners, its close relationship with the United States cannot be neglected. Canada was also chosen to be the host country of the 1997 ICSID design congress. The Mayor of Toronto has been very active in supporting design and has attended the 1995 ICSID Design Congress Taipei in person.

3) UK & Germany

Both UK and Germany are among Taiwan's top ten trading partners. The British were the first to found a Design Council and have a great influence in the development of design worldwide. The most important contribution from

Germany is the Bauhaus which played a major role in modern design history.

4) Italy

Italy is one of Taiwan's five largest trading partners in Europe. The Italians are famous worldwide for their design and has been greatly admired among Taiwan's manufacturers and designers.

Taiwan's five largest trading partners in Europe in the year 1999 are:

1) Germany, 2) The Netherlands, 3) UK, 4) France and 5) Italy.

(Department of statistics, Ministry of Finance , Taiwan,1999)

5) Japan

Japan is considered one of the world's strongest economies and its economic miracle is mostly the result of good planning and emphasis on the importance of design within its industries.

The design population in Japan is mostly concentrated in Tokyo, Osaka and Nagoya, with 50% in Tokyo, 25% in Osaka and 12% in Nagoya, most are employees in large co-operations with a small minority working as independent freelancers.

Japan has had a long-lasting influence on Taiwan's manufacturing and design industry. The close relationship between the government and industry has also attracted worldwide attention.

6) South Korea

The government of South Korea completed its "5yr Industrial Design

Development Plan” in 1992 and is currently focusing on the training of new designers to improve its design capabilities.

The economic development in South Korea is very similar to that of Taiwan with the exception that most Taiwanese industries are focused in lightweight industries while their Korean counterparts are mostly into heavyweight industries. Although Korea is still considered weak in its influence, its government has been very actively promoting the power of design in the recent years and will soon become one of Taiwan’s fiercest competitors so its policies shall not be neglected.

There are also several other European and Asian countries that have been quite active in promoting design, but the author has chosen not to list them in the comparative studies for the following reasons:

1) Hong Kong

The trade development council of Hong Kong is the principal design promotion organisation. A Design Gallery was founded in March 1993 and it has by now become a showcase for some of Hong Kong’s best products and also serves as an expensive outlet for some of its best designs. **(Hong Kong, CETRA 1996)**

Taiwan has been using Hong Kong as a trading point to export its products to China and the rest of the world.

Hong Kong’s design policy has never been very clear and has recently been under the control of Mainland China.

2) China

Although China is Taiwan's fiercest future competitor, the concept of design still has to develop and has not yet much influence on its products. China first realised the importance of design and the possibilities it can bring about after it decided on the open door policy. Design in China is still considered as a part of its scientific and technological development under the "China scientific development research centre" in Beijing. Due to the enormous growth in commercial activities in the recent years China has also begun to collaborate with Hong Kong in design activities but has not yet founded an institution responsible for promoting and coordinating design activities.

3) Singapore

The first biennial Singapore Design Forum and Design Exhibition was held in 1988. Designers from all over the world have been invited to take part in these activities. Taiwan was also invited to take part in the 1st and 2nd conference and exhibit some of its best products as ROC. An annual Singapore Design Awards has also been founded to encourage new young design talents and a design centre has been officially inaugurated in 1991 to promote and coordinate design activities. Although the Singapore government has been actively supporting design and their manufacturers have also given it some importance, its industry does not have a very strong base.

4) Malaysia

SIRIM is the main organisation that is responsible for promoting design in

Malaysia. A product design division was founded in 1987 to specifically promote design activities and carry out consumer product research.

SIRIM held its 1st international design convention and expo from Sept through Nov 1991. A national design exhibition centre and a national packaging research and testing centre was also founded.

Although the Malaysian government has been actively supporting design in the recent years, their manufacturers still have to get used to the idea and improve themselves.

5) Australia

It is the responsibility of ADD (Australian Design Development Institute) and ADC (Australian Design Council) to come up with a solution for the national design policy of Australia.

ADD is the largest design organisation of Australia – lacking government funding and support - was founded in 1990 and has already begun to work on long term design policies and objectives.

ADC used to be the most important design organisation in Australia before the foundation of ADD and has been responsible for the Australian Design Award - the most coveted design award in Australia - since 1967 (**Design Competitiveness CETRA ,1996**).

Australian design has not yet been recognised as competitive.

6) France

France is known for its fashion industry. Most design activities in France have

been promoted by the Industrial Design Association in France (IDFI). There are currently 10 design centres in France that form a national network.

For product design, UK, Germany and Italy have far greater attraction to Taiwanese manufacturers.

7) The Netherlands

Although The Netherlands has also been very active in its design activities, there has never been a strong organisation to coordinate these activities.

8) Others

Other countries such as: Spain, Denmark, Sweden and Finland have also made important contributions to design but have not enjoyed such a close relationship with Taiwan.

As a consequence it was decided to focus on USA, Canada, UK, Germany, Italy, Japan and Korea for this comparative study.



3. 2 Taiwan

3.2.1 The Beginning of Industrial Design in Taiwan: influenced by USA and Japan

Taiwan's industrial design efforts started in the decade of the 1960's. What greatly influenced Taiwan's development in industrial design was the assistance offered to Taiwan by the U.S. for the rapid development of its economy. On recommendations from U.S. security agencies, the Industrial Development Commission of the Executive Yuan started planning design development projects and later established two non-profit organisations--the Taiwan Handicrafts Promotion Centre and the China Productivity Centre (IDB/MOEA 1996).

The Taiwan Handicrafts Promotion Centre:

The establishment of the Taiwan Handicrafts Promotion Centre was an initial step in the government's efforts to start an industrial design movement in Taiwan. (Handicraft : Taiwan Handicraft Research Institute, 1990). Founded in 1955, the centre invited foreign industrial design experts to assist in design guidance work with financial assistance from the U.S. aid scheme

The China Productivity and Trade Centre:(Taiwan)

The China Productivity Centre (CPC) was established at the same time as the Taiwan Handicrafts Promotion Centre, with its initial focus on offering guidance to

small and medium enterprises. Later, an expansion of operations led to an organisational restructuring in 1958 and a name change to the China Productivity and Trade Centre (CPTC). The Trade Promotion Department of CPTC was then established to help develop external trade and offer assistance to local enterprises to expand into overseas markets.

In 1959, the Product Improvement Section was formed within the Trade Promotion Department of CPTC. The section was under the leadership of Mr. Hsiao Ju-huai, who was assisted in design promotion work by an American industrial designer, Mr. A. B. Girady.

To further expand the center's industrial design promotion work and upon recommendation of Mr. Girady, Professor Shinji Koike Director of the Artistic Conception Development . Department of Japan's Chiba University, was invited to Taiwan for a series of lectures and an observation tour around the island. After returning to Japan, Professor Koike gave his opinions on the industrial design promotion work being done in Taiwan. Meanwhile, a German design consultant, Mr. Jorge Glasenapp, was sent by the United Nations to Taiwan. **(CETRA, 1982)** In 1970, the China Productivity and Trade Centre (CPTC) underwent a reorganisation under the instruction of the Ministry of Economic Affairs (MOEA). Its trade promotion function was taken over by the China External Trade Development Council (CETRA). CPTC has since been renamed the China Productivity Centre (CPC).

The China Industrial Designers Association: (Taiwan)

China Industrial Designers Association was established on December 12, 1967. With the support of the China Productivity and Trade Centre (CPTC), 30 people who had just completed their industrial design training courses gathered together to hold the association's inaugural meeting.

Since 1967, China Industrial Designers Association has devoted itself to the promotion of the Industrial Design profession. Membership has increased from a total of 30 to over 130 individual members, some group members and over 400 student members. The members come from the fields of professional design, design education, and design promotion. **(CIDA, Taipei, 1994)**

The China Industrial Design and Packaging Centre: (Taiwan)

New opportunities in design promotion work in the 1980s led to the establishment of a professional design promotion institution--the China Industrial Design and Packaging Centre--on May 1, 1973,

This centre was founded as a non-profit making body. Members of the board included officials of the MOEA and well-known local entrepreneurs.

After six years of operation, apparently not credited for its performance, the China Industrial Design and Packaging Centre was disbanded in 1979 after a decision by the Ministry of Economic Affairs (MOEA). Then MOEA and the founder of the China External Trade Development Council (CETRA) Mr. K. H. Wu invited Mr.

Paul Y. J. Cheng, the Head of the Industrial Design Department of the Tatung Company, a famous enterprise in Taiwan, to set up the Industrial Design Promotion Department under CETRA.

3.2.2. Taiwan's First Academic Course in Industrial Design Education

begun in 1959:

In 1959, the first course in industrial design was started in Taiwan when the National Taiwan Academy of Arts offered monographic lectures and programmes on industrial design, with Mr. A. B. Girady, then Adviser to the China Productivity and Trade Centre, as lecturer. In 1964, the first truly academic course in industrial design was offered by the Ming-Chih Institute of Technology, an affiliate of the Formosa Plastics Corporation. This was the start of education in industrial design in Taiwan. Later, various colleges also started offering similar courses, such as the Taipei Institute of Technology in 1965 - one year after Ming-Chih pioneered courses in this field. **(Industrial Design, Ming – Chih Institute of Technology 1990)**

The National Cheng Kung University established its Department of Industrial Design in 1973 with the goal of training high level industrial design talents. In the same year, the Tatung Institute of Technology also started to offer a university course in industrial design.

Other universities and colleges that subsequently offered a degree in industrial design included: Tunghai University, Dai-Yeh Institute of Technology, Yunlin Institute of Technology and Shih-Chien College. At graduate level, the Graduate School of Mechanical Engineering of the National Cheng Kung University set up the Industrial Design Section in 1984. The Graduate School of Industrial Design was formally established in 1991. In the same year, an industrial design section was added to both the Graduate School of Mechanical Engineering of the Tatung Institute of Technology and the Graduate School of Applied Art of the National Chiao Tung University. By 1993, there were more than 20 colleges and universities granting undergraduate degrees in industrial design. More than 40 courses were offered design-related subjects such as industrial design, commercial design, artistic design, interior design, advertising, fashion and urban planning. About a thousand students complete their studies and training through these schools and courses every year.

3.2.3. Taiwan's national design promotion organisation since 1979

3.2.3.1 The China External Trade Development Council -

**the most important organisation for promoting international trade
since 1970**

The China External Trade Development Council, or CETRA, was established in 1970. At that time, Taiwan saw the need for promoting international trade in a systematic and organised manner, especially in view of the robust growth of

Taiwan's external trade. Together with private business and industrial organisations, the Government founded CETRA, an institution with a legal entity status to professionally handle trade promotion work. In establishing CETRA, the Government hoped that with the availability of an integrated service, local traders could occupy a niche in the constantly changing world of global trade and economics. The organisation was also aimed at assisting Taiwan's industrial sector in its efforts to develop new markets and expand trade.

Since its foundation, the China External Trade Development Council has, under the leadership of a Board of Trustees made up of government finance and economics officials and leaders of local business and industrial sectors, integrated its efforts with 43 overseas offices worldwide and ten domestic departments. The services offered by CETRA to local industrial and trade sectors include the following: **(CETRA annual reports, 1989)**

- 1. Trade promotion and new market development.**
- 2. Exhibitions.**
- 3. Planning and research work.**
- 4. Business information services.**
- 5. Training of trade personnel.**
- 6. Conference services.**
- 7. Design promotions.**

Design promotion work was started in the 1979 when Taiwan's economy experienced rapid growth in external trade and Taiwan's industries developed at a fast rate. Manufacturing technologies were imported and adopted by local industries; one factor that contributed to making Taiwan the largest processing zone in Asia. All these paved the way for the so-called "Taiwan Economic Miracle." Attracted by the excellence of Taiwan's manufacturing technology and the abundant cheap labour available at that time, many well-known foreign firms established operations in Taiwan. As a consequence, many of Taiwan's industries were engaged in OEM (Original Equipment Manufacturing) production. The result of too much leaning towards the OEM role was that local industries lost the ability for independent development and innovation. Copying and counterfeiting became a common practice, which earned Taiwan the unsavoury title "Kingdom of Piracy".



Figure 3.1 The area and the building of the
Design promotion centre/CETRA, Taipei

3.2.3.2 Design Promotion Centre / CETRA—

Taiwan's national design promotion organisation since 1979

Facing such a situation, CETRA founded the Industrial Design Promotion Department in 1979 with promoting external trade and assisting industrial upgrading as its basic goals. The department was placed in charge of offering professional guidance to industries in their product and packaging design and of assisting manufacturers in establishing their own brands. The department also handles promotion work for exports and improving the competitiveness of local products in the international market. The founder, executive director of the department is Paul Y.J. Cheng.

The Industrial Design Promotion Department was expanded in 1990 and renamed the Design Promotion Centre, or DPC/CETRA. This reorganisation was made in view of the ever-changing structure of the increasing sector volume, the international market and the expanded operations of *design promotion work*.

In the context of Taiwan's design promotion movement, the Design Promotion Centre/CETRA has played the role of a channel of communication and dialogue between local industries, the government sector and the academic sector. This role has successfully pooled government, industrial and academic resources for design development in Taiwan.

For the past decade, the Design Promotion Centre has always adhered to its policy of globalisation in design promotion and designing. Under this policy, the

activities sponsored by the centre, such as the Taiwan International Design Exhibition (TIDEX) and the Taipei International Design Interaction (TAIDI), have received the support and widespread recognition of local manufacturers.

The Taipei International Design Exhibition (TIDEX)

This exhibition has been given much importance by the industrial sector since it started in 1981. With government support and encouragement, the exhibitions have always enjoyed all-out participation by industry. The holding of this annual exhibition motivates research and development, as well as design work within industries. The outstanding designs selected each year performed well in both the local and export markets. In 1985, the scope of the exhibition was expanded with invitations sent to the producers of outstanding designs overseas. In 1991, the design exhibition became part of a larger activity, the National Design Month.

(Design, CETRA 1991)

The Taipei International Design Interaction (TAIDI)

The Taipei International Design Interaction started in 1987 with the goal of inviting foreign design experts to assist domestic industries in developing new products. It aims to bolster integration of local and overseas design concepts and technology. In Taipei the China External Trade Development Council selects 10 local manufacturers to team up with 10 foreign design experts in design cooperation projects. Foreign design experts are invited to come to Taiwan for two weeks during which they engage in face-to-face discussion with local factory personnel. **(TAIDI, CETRA 1987)**

By holding symposia and project results presentations, the latest design concepts and methods are imported from other countries and design exchanges, both local and international, are promoted to the benefit of Taiwan's design upgrading and image. At the same time, this activity also represents a turning point in the area of cooperation between Taiwan's industrial sector and overseas design circles.

As a result, many internationally known design companies established branch operations or agents in Taipei or established joint ventures with local design companies. The number of local companies inviting foreign experts as consultants is growing continuously.

3.2.4. The Promotion of Design Globalisation

Following Taiwan's economic growth and closer trade ties with countries all over the world, design globalisation and the formation of an international design organisation will become a necessity in the near future. In the past decade, the Design Promotion Centre/CETRA has done much in the area of design promotion, especially in the globalisation of Taiwan's design.

Realising the limited results derived from individual efforts, the Design Promotion Centre has actively participated in all types of activities sponsored by international design organisations. Of them, the most significant activities were those of the International Council of Societies of Industrial Design, or ICSID.

3.2.4.1 A Brief Introduction to the International Council of Societies of Industrial Design (ICSID)

The International Council of Societies of Industrial Design is a non-profit industrial design promotion organisation. Founded in 1957 in London by a group of European designers with high ideals, the council established its initial headquarters in Paris. In 1974, its headquarters was moved to Brussels. During the General Assembly Meeting held in Washington, D.C. in 1985, a resolution was carried to establish the organisation's headquarters in Helsinki, Finland. Its goals include the promotion of industrial design, bringing welfare to the human race, providing assistance to industries in design development and upgrading, and in the creation of a harmonious, comfortable living environment for all people.

(Worldesign, USA, ICSID 1985)

As of March 1994, ICSID had a total membership of 113 design organisations and institutions from 43 countries around the world. Such an organisation that transcends politics and race and that works for the welfare of mankind will play an even greater role in the future.

ICSID holds a Design Congress and a General Assembly once every two years. Among Asian countries, only Japan has played host to the congress twice. The first was held in 1973 in Kyoto and the second was held in 1989 in the city of Nagoya. The 1973 Congress in Kyoto allowed delegates to see the efforts and contributions made by the Japanese Government in its design development. The holding of the congress also opened the eyes of Japanese manufacturers to the

potentials of design. In 1989, Japan again hosted the Design Congress, this time in Nagoya. The congress was jointly held with the World Design Exposition, an unprecedented event that attracted more than three thousand delegates. The number of visitors, both local and foreign, reached a total of 1,000,000. This congress showed to the whole world the quality and excellence of Japan's designs and its outstanding design image. **(ICSID Congress, Japan 1989)**

3.2.4.2 Taiwan's Active Participation in International Design Exchanges

Taiwan first formally participated in ICSID activities in 1965.

In 1965, the Economic Cooperation Organisation (ECO) sent Mr. Fan Hsiang-sun to attend the Fourth Design Congress of ICSID in Vienna as an observer. In the following year, the

China Productivity and Trade Centre filed an application to ICSID and was granted provisional membership.

China Productivity and Trade Centre: The First Taiwan Design Organisation to Join ICSID

The ICSID Fifth Design Congress and General Assembly was held in 1967 in Canada. the China Productivity and Trade Centre. From then on, Taiwan started to become active in the world of international design.

The China External Trade Development Council and the China Industrial Designers' Association Become ICSID Members

The ICSID fourteenth Design Congress and General Assembly were jointly held with an international design exhibition called "Worldesign '85" in 1985 in Washington, D.C. Taiwan was represented in the congress and exhibited by CETRA. Taiwan exhibits were entitled "Industrial Design Development in a Newly Industrialised Country: Taiwan's Outstanding Product Designs". This participation is significant for two reasons: (1) Showing Taiwan's industrial design development conditions to the whole world and its shift from the defensive attitude adopted in the past due to a bad image to a more active and positive stance, and (2) The exhibition contributed to the improvement of Taiwan's international image and standing.

Having been invited by the U.S. organizers, Mr. Paul Y. J. Chang, Executive Director of the Design Promotion Centre, delivered a speech to the congress entitled "The Development of Industrial Design in Taiwan." During this General Assembly, the China External Trade Development Council and the China Industrial Designers' Association were also granted membership status.

3.2.4.3 Taiwan's Entry to the Core of International Design

The ICSID Sixteenth Design Congress and General Assembly was held in 1989 in the Japanese city of Nagoya. This year was named "Design Year" by the Japan Industrial Designers' Association (JIDA), the Japan Industrial Design Promotion

Organisation (JIDPO), the Nagoya Business Federation, and the city government of Nagoya. The host city was given the title "Design City Nagoya" (**Japan News, 1989**). The ICSID activities were jointly held with the World Design Exposition which greatly benefited Japan's national image and reputation. Taiwan was represented by CETRA whose exhibits' theme was "Taiwan: Today, Tomorrow" featuring outstanding design products previously selected during the "Taipei International Design Exhibition" such as personal computers from Acer Inc., a high fidelity TV from Tera Electronics, tennis rackets from Kunnan Enterprises, Ltd., bicycles from Giant Manufacturing Corp., Ltd., as well as Taiwan's handicrafts, lamps and other representative products (**CETRA, 1989**). These items, reflecting Taiwan's design capacity and efforts in design promotion, received acclaim from the international participants.

Mr. Paul Y. J. Cheng was elected as one of the members of the Board of ICSID during the general assembly. From this time on, Taiwan formally entered the inner circle of international design. It was a milestone in the history of Taiwan's design globalisation efforts. During this Design Congress and General Assembly Taiwan expressed its desire to play host in 1995. Other contenders to host the 1995 event included Germany and Australia. (**ICSID News Letter, 1989**)

In 1992, the ICSID Design Congress and General Assembly was held in Ljubljana, capital of newly independent Slovenia. The theme was "At the Crossroads." The event was originally scheduled for September 1991, but due to the civil war in Yugoslavia, it was postponed until May 1992. Taiwan's delegation,

totalling more than twenty, included participants from the design sector, academia and the government sector. At the invitation of the organising committee, Mr. K. H. Wu, vice chairman of CETRA, delivered a speech entitled the "Corporate Identity System Strategy and the Design Centre" during the Design Congress. The paper also explained how the government provides assistance to design development and detailed the growing awareness of the importance of design research and development to Taiwan's industry.

3.2.5. ICSID '95 Congress held in Taipei

In 1987, the 15th ICSID Congress was held in Amsterdam. Taiwan was represented by a delegation from the DPC. The delegation took advantage of the congress to look into the possibility of hosting the ICSID Congress in Taipei. When the 1989 ICSID Congress was held in Nagoya, Japan, Taiwan formally submitted a bid to host the 1995 Congress. Other countries competing for this honour were Germany and Australia. In 1992, during the 17th ICSID Design Congress held in the former Yugoslavia, the congress delegates voted in favour of Taiwan to host the 1995 ICSID Congress. From then on, CETRA, with support from the government and local industrial sector, design circles and design academia, started preparatory work for Taipei's hosting of the event in 1995.



Figure 3.2 The Design Congress and General Assembly in Taipei 1995.

The ICSID Design Congress held in September 1995 in Taipei was the result of Taiwan's efforts to promote design internationalisation over the years and proof of the achievements we have made. The Congress attracted almost 1,000 representatives of industry, academia and governments from more than 30 countries around the world. It marked the start of a new era in the development of design in Taiwan.

The successful holding of this event in Taipei was due not only to full support from the government and private enterprises but also to our participation in various activities sponsored by ICSID member organisations over the years. Our efforts in the international design community were also instrumental in the overall success of the event.



Figure 3.3 The Phoenix logo at the 1995 ICSID
General Assembly and Congress, Taipei

The effects of holding the Congress in Taiwan are summarised in the report:
(CETRA, 1996)

3.2.5.1 For Taiwan's Industry

Taiwan's design development from the 1950s to the 1970s was greatly influenced by Europe, the United States and Japan. Since the 1970s, local industries gradually accumulated manufacturing technology and production capabilities through OEM arrangements. Under appropriate government guidance, the country was able to gradually develop its own industrial competitive edge and a system of distribution of labour. With the adoption and promotion of certain strategies by CETRA, Taiwan expanded its international trade and economic elbowroom. Industry developed, together with a rise in manufacturing standards.

In the 1970s, Taiwan government realised that in order to expand in the areas of trade and economics, effective government assistance must be offered to developing industries. Thus, assisting industries in upgrading their design capabilities became an important priority of the government. In 1979, the government ordered CETRA to establish a product design department. From then on, Taiwan's design development gradually became intertwined with trade and economic development. The government also took steps to guide industries in shifting from the manufacturing-oriented OEM mode to the design-orientated ODM mode.

By the 1990s, local industries, armed with almost two decades-worth of accumulated production technology and design expertise, started expansion efforts to gradually enhance Taiwan products' brand image and international

marketing channels. After the conclusion of ICSID '95, local industries have realised the importance of exchanges with international design circles in the development of local design. For this reason, our industries will increase their activities in the field of international design exchange and participate in more overseas design activities such as international design competitions and good design product selections. They will likewise devote more attention to the development of a local design culture and the internationalisation of product designs. Only in this way can local industries successfully create a design culture and style unique to Taiwan.

3.2.5.2 For Taiwan's Design Community

Taiwan's design community has been experiencing robust growth over the past two decades. Design company numbers have ballooned from about ten in the 1970s to the present level of about 3,000. Foreign design companies have set up local branches or *entered into partnership with local counterparts. Our design industry has already started competing internationally.* Thus, the future development of design in Taiwan can only be attained with the continued upgrading of technology and innovation, and an emphasis on cross-border cooperation and internationalised development. Only in this way can we retain our competitive edge and ensure further development.

3.2.5.3 For Taiwan's Design Education

Schools offering industrial design courses in Taiwan now total more than 20. If

other design courses, such as commercial design, fine arts design, interior design, advertising, apparel design and urban design are included, the total reaches more than 40. Every year, approximately one thousand design course graduates join the work force. The 'Young Designers' Exhibitions, held annually by CETRA, are showcases for the local design education system and the vibrant creativity of locally trained design talents. Through participation in congress activities such as the International Young Designers' Workshop and others, local design education circles have become aware of the need to emphasize development of international vision in the training of designers, as well as foreign languages and communication techniques. Only in this way can newly trained designers excel in both design techniques and design diplomacy. Only using these techniques can they meet new trends and needs in industrial development, as well as increase interaction between design education and industry.

3.2.5.4 For Taiwan's Government

The fact that the ROC could make a name for itself in the world of international design within a short span of ten years, tells people something about the country's industrial sector and the professionalism as well as the self-demanding spirit of the local design community. These achievements can even more be attributed to the government's promotion of the "Five-year Plans for Upgrading Industrial Design Capabilities" which set the stage for this success by emphasizing R&D, design guidance, personnel

training and promotion. The plans provided the venue for industry and design circles to show their talents. (CETRA 1996)

3.2.6. Current Status in Taiwan: It's Economy, Industry and Design with Reference to the Global Trading Situation

3.2.6.1 The Ever-changing Production Patterns

--from Original Equipment Manufacturing (OEM) to Original Design Manufacturing (ODM) to Original Brand Manufacturing (OBM)

The 1970s and Early 1980s – OEM

Over the years, Taiwan has also experienced different production patterns. Particularly in the 1970s and early '80s, foreign buyers often brought in samples designed abroad and requested local manufacturers to produce them accordingly. We call this system Original Equipment Manufacturing (OEM). At that time, although Taiwan acquired a considerable amount of manufacturing know how, it still lacked original designs. As a consequence, manufacturers were mostly engaged in OEM production and placed little emphasis on developing their own expertise in design and innovation.

Taiwan's economic climate also changed during this period. We witnessed a stabilizing economic growth, rising labour costs, an appreciating currency and tighter environmental protection measures. All these factors made the OEM system of production less profitable.

The 1980s -- ODM

To cope with the changing economic environment, the government sought to actively promote design in an effort to raise the competitiveness of the country. In response to the government's efforts, the China External Trade Development Council (CETRA), a non-profit trade promotion organization supported by the government, took the initiative and established the Design Promotion Center (DPC) on March 16, 1979.

DPC/CETRA worked closely with the government, design institutions, designers and manufacturers to promote original design in manufacturing. As a result, industry gradually shifted its production pattern from the OEM system to the ODM (Original Design Manufacturing) system.

The 1990s -- OBM

In the 1990s, despite improved quality and design, Taiwan-made products still have a rather modest image in the international marketplace. Having realized this, the government has launched an international image building campaign and encouraged industry to shift towards the OBM (Original Brand Manufacturing) system and to begin establishing Taiwanese manufacturer's own brand names.

From MIT to DIT to Innovalue

- (1) 1970's – OEM Quality (Manufacturers) -> MIT (made in Taiwan)
- (2) 1980's – ODM Design -> DIT (designed in Taiwan)
- (3) 1990's – OBM Image (Brand) -> Innovalue

A. OEM (in the 1970's)

Advantages:

- 1. Mass production skills and technologies
- 2. Profitable manufacturing
- 3. Int'l vision of world market
- 4. Labour market opportunities
- 5. Int'l contacts and relationships

Disadvantages:

- 1. Few own brands
- 2. Weak wage
- 3. Little local decision making
- 4. Infringement of copyrights, trademarks, patents
- 5. Little added value, low profits

B. ODM (in the 1980's)

Advantages:

- 1. Own designers & designs

2. Own image
3. Local decision making
4. Member of Int'l design organization
5. Design in Taiwan has priority over made in Taiwan
6. Product design – added value
7. Image is based on design and quality
8. Design make products competitive

C.OBM (in the 1990's)

Advantages:

1. Organization / Brand International Promotion Association is established (BIPA)
2. Design & quality build brand strength
3. Image Chain: product-industry-national-international
4. OBM wins sales

Image promotion is a long lasting business. However, building up a new national identity in the competitive international market is no easy task. Although Taiwan's products have been sold all over the world its products does not really have its own image and identity in comparison to some other countries. As we all know, Italy is famous for design, Japan for quality, Germany for engineering and the USA for its technology. So we should first find out what the characteristics of Taiwanese products are, then build up a positive image to promote on

international markets. The characteristics of Taiwanese products shall be
"Innovation + Added Value =Innovalue" (**Taiwan Excellent, CETRA 1996**)

In the late 1980's both government and private sectors reached a consensus that it was time to do something about the negative image of Made in Taiwan. For the government it was a matter of national pride as Made in Taiwan had long suffered the butt of international jokes for quality and reliability. For manufacturers it was a question of both pride and business. Buyers and consumers have long demanded an automatic discount on goods made in Taiwan. They had come to expect cheaper prices from Taiwan.

But as economic reality and force of developmental cycle pushed Taiwan to the higher end of the markets to survive, manufacturers had no choice but to invest large funds in research & development of new, higher added value, innovative products. The only to recoup the R&D investment is through higher pricing strategies. Thus, the bad image of Made in Taiwan stood in the way of the evolution. That's when government decided to take the lead in order to overcome the image problem.

The signature of Good Design is the main structure or logo of the DESIGN programme. It is also used as a mark of distinction for award winning Taiwanese products, and thus used by the manufacturers for promoting their award winning products.

The symbol of quality and Excellence are the main signature or logo of the QUALITY and IMAGE programme.

Figure 3.4 The Mark and Logo of the Taiwan good Design, Quality and Image



The "Good Design" Mark

The "Taiwan Quality" Logo

The "Taiwan Excellent Product" Mark

3.2.6.2 The three five year plans for upgrading Quality, Design and Image

In 1988, Taiwan's Ministry of Economic Affairs (MOEA) earmarked a total of US\$170 million for three aggressive 5-year plans aimed at developing industrial design in Taiwan and improve the quality and Image of Taiwan-made products. A description of these 5-year plans follows:

- (1) The Five-year Plan for Quality (1988-1993; 1993-1998; 1998-2003) was the first of the 5-year plans initiated by the Industrial Development Bureau of MOEA. The China Productivity Center (CPC) and the CSD Industrial Coordination Center were chosen to execute these plans. This plan aims to upgrade product and manufacturing quality in Taiwan.

(2) The Five-year Plan for Image (1990-1995; 1995-2000; 2000-2005)

seeks to create a more positive image for Taiwanese products around the world. CETRA will implement the plan on behalf of the Board of Foreign Trade at MOEA. The Image Enhancement plan consists of two major programmes: one to improve the international image of Taiwanese products and the other to help Taiwanese companies establish strong corporate brand and identities.

(3) The Five Plan to Upgrade Design (1989-1994; 1994-1999; 1999-2004)

These plans combine academic and industrial forces to create a brighter future for Taiwanese industries. IDB/MOEA selected DPC/CETRA as the major entities to organise and execute these plans.

Although Quality, design and image are all related to each other, design is considered to be the most important of the three. IDB/MOEA's design plan is most important and most influential to the production industry. Most medium and small-sized industries in Taiwan are beginning to feel the need for better design.

As a Design Plan is most crucial to Taiwan's design promotion policy, this investigation will concentrate on this aspect in the research for a Design Policy in Taiwan.

3.2.6.3. The First Five-year Plan for Upgrading Design

The First Five-year Plan for Upgrading Design (1989-1994)

The Second Five-year Plan for Upgrading Design (1994-1999)

The Third Five-year Plan for Upgrading Design (1999-2004)

Since 1986, Taiwan has experienced an exodus of manufacturers who have shifted their production overseas. Appreciating currency, rising labor costs, international protectionism, and the competition of newly developing countries have played a part in bringing about this exodus, which has adversely affected domestic industrial development.

To promote industrial design and raise the added value of products, the Industrial Development Bureau (IDB) under the Ministry of Economic Affairs (MOEA) has since 1990 implemented the Five-year Plan for Upgrading Industrial Design aimed at promoting the overall upgrading of domestic industrial capabilities. The first Five-Year Plan for upgrading Industrial Design Organisation established in July 1989 (Appendix 5 **CETRA, 1989**).

The plan's four major areas of work are:

(1) Training

The training of talents in industrial design will help raise Taiwan's design to the level of the developed countries.

(2) Product Development and Consultancy

The various product development projects enable manufacturers to turn to both domestic and foreign designers for the development of new products, for the improvement of product packaging and the overall image, and for the selection of the right approaches in design.

(3) Research and Development

Investigation of design techniques for different industries, information gathering, and the implementation of various special research projects can help manufacturers establish design standards, procedures and rules, and acquire consulting services.

(4) Promotion

Design promotion is oriented both domestically and overseas. Internally, the general public and manufacturers need to learn more about design and its importance; externally, the country needs to build up an international image for its products. Over the years, DPC/CETRA has sponsored many promotional programmes, taken part in many overseas design events and encouraged visits between domestic and foreign designers and design institutes.

The Promotion of the Good Design Mark (G-mark) and Products

One particular promotional effort worth mentioning is the promotion of the Good Design Mark (G-mark). DPC/CETRA awards the mark to qualified products in

G-mark product selections to encourage manufacturers to design excellent products. G-mark product selections are now held four times a year and applications are open all year around. DPC/CETRA also runs strong media campaigns to introduce G-mark products to foreign buyers and the public. G-mark product exhibitions are held irregularly both domestically and overseas and a directory of G-mark products is being published.

The Taipei Design Centers (TDC's) in Dusseldorf, Milan, Osaka, Paris and San Francisco

Another government sponsored project executed by DPC/CETRA that has much to do with the promotion of industrial design in Taiwan and therefore is complementing the five-year plan for upgrading design is the international design coordination project.

CETRA established the Taipei Design Centres (TDC's) under this project. The centres are located in Dusseldorf, Milan and Osaka, established respectively in 1992, 1993 and 1994 another one shall be established in San Francisco by the end of 1999.

The TDC's help manufacturers gain a better understanding of European and Japanese market trends and design requirements. They also supervise design consultancy projects and market analysis done by foreign designers hired by Taiwanese manufacturers.

In the government effort to redress Taiwan's huge trade deficit with Japan, Taipei Design Centre Osaka plays an important role in penetrating the Japanese market by designing products targeted to that market and assisting the manufacturers sell these products.

In 1995, the five-year plan for upgrading design began its second term. The plan was expanded to include the international design coordination project and the plan for upgrading textile design encompassing the whole product design territory in Taiwan. To introduce the world's latest fashion designs and techniques, Taipei Design Centre Paris was established in the same year.

3.2.6.4 The second Phase of the Five-year Plan for Upgrading Industrial Design (1994-1999)

The small-and medium-sized enterprises in Taiwan created an economic miracle in the 1960s and '70s through the practice of OEM (Original Equipment Manufacturing) system under which local manufacturers took the samples of foreign buyers and produce accordingly.

In the 1980s and '90s, Taiwan-made products, which once were sold on the international marketplace in large quantities and with a rather cheap price, have gradually been driven out of market by products made by developing countries. In particular South East Asian countries, as rising labor and production costs have made Taiwan-products less competitive.

It is obvious that Taiwan must create own designs and raise the added value of its products in retain its competitiveness. Being a weak link in Taiwan's whole production process, design is nevertheless most effective in raising the added value of products. In view of this, the Industrial Development Bureau (IDB) under the Ministry of Economic Affairs (MOEA) introduced the first phase of the Five-year Plan for Upgrading Industrial Design from 1989 to 1994. After five years' implementation and a concerted effort by the government, manufacturers, education institutions, and government-entrusted design institutes to upgrade industrial design, manufacturers have gradually attached importance to design and applied design techniques in product development. They have also come to realise that if Taiwan-made products are to win international recognition as high-quality products, design upgrading is the key. It may well be the lifeline for their survival.

The first phase of the plan is credited for the following achievements:

- A. Inculcating basic concepts of industrial design in manufacturers**
- B. Fostering initial common awareness on the importance of design among domestic forces**
- C. Establishing a design consultancy structure.**
- D. Mustering domestic and overseas design resources to help manufacturers develop products of good design.**

The first phase of the plan ended in 1994. Beginning in 1992, the Industrial Development Bureau entrusted the China External Trade Development Council (CETRA) to execute the Five-year Plan on the Strategies for industrial Design development. CETRA grouped design specialists in the government, manufacturing and academic circles to form a planning committee. The committee held several meetings and sent out questionnaires to manufacturers and designers. Finally it completed the Five-year Plan on the Strategies for Industrial Design Development. The purpose of the plan is to formulate concrete strategies and projects based on the achievements of the first phase of the Five-year Plan for Upgrading Industrial Design.

The four main areas of research of the Five-year Plan on the Strategies of industrial Design Development are: **(IDB/MOEA, 1994)**

1. analysis of the current international development of industrial design; mainly a study of the experiences and trends in the development of industrial design in Europe, the U.S., Japan, newly industrialising countries, and developing countries.
2. analysis of the environment affecting industrial design development; analysing environmental factors affecting the medium- and long-term development of industrial design in Taiwan.

3. analysis of the current industrial design development; analysing the current status and requirements of Taiwan's industrial design from different angles, including analysis on current industrial development, of current design development, and of current design promotion development; studying opinions of manufacturers, government agencies, and academics on the domestic requirements.
4. analysis of the goals, strategies, and measures for the development of industrial design; setting up the medium- and long-term goals, strategies, and measures for Taiwan's industrial design development by analysing the current status and environmental factors of the domestic and international industrial design development, and by summing up the achievements in industrial design promotion, while taking into consideration the future directions and policies of industry.

Through the above-mentioned all-round analysis and planning, the goals of the Second Five-year Plan for Upgrading Product Design have been set up. They are:

- A. Assisting manufacturers to develop products of good design, and improving manufacturers' ability to develop their own product
- B. Conducting design information research and development, and assisting manufacturers with the application of core design techniques

- C. Establishing design information networks, and providing manufacturers with all-encompassing design information
- D. Publicising the right approaches to product design, and fostering a common respect for design in the minds of manufacturers and the public
- E. Promoting domestic and overseas design-related exchanges, and design internationalisation
- F. Assisting up-, medium-, and down-stream textile manufacturers to enter into cooperation and integration in product development
- G. Integrating design resources from all forces, and transforming Taiwan into a design centre in the Asian and Pacific region
- H. Conducting industrial designers training programs, and laying the foundation for future upgrading of industrial design

The guideline for the promotion of the Second Five-year Plan for Upgrading Product Design is to further consolidate the work done in the first phase of the plan, taking the past experience and future outlook into perspective. The second Five-Year plan for upgrading Industrial Design (1995-2000) organisation established in July 1994 (Appendix 6 **CETRA, 1994**)

Based on previous work, the second phase of the plan will make an all-out sortie in design counselling and promotion. It will place more emphasis on the integration and management of different plans and programmes, bringing into full play the power of a combined total force and paving the way for The Third Five-Year Plan and Taiwan's advancement into the ranks of developed countries by the 21st century.

Conclusion: Taiwan

Taiwan Hi-tech products, computer and telecommunication are very popular overseas. The targets for Production were--from 1970's Original Equipment Manufacturing (OEM) to 1980's Original Design Manufacturing (ODM) to 1990's Original Brand Manufacturing (OBM). In the 1970s Taiwan government emphasis product quality and the made in Taiwan (MIT) system. In the 1980s the Taiwan sought to actively promote design in an effort to raise competitiveness. In the 1990s, improved quality and design were insufficient and the government began establishing Taiwanese manufacturer's own brand names. As a result, Taiwan began to build up a positive image to promote on international markets. The targeted characteristics of Taiwanese products should be "Innovation + Added Value =Innovalue".

Taiwan Government's awareness of the importance of good product design, led to the establishment of the design promotion centre (DPC) under China External Trade Development Council (CETRA) in 1979 to promote good product design.

In 1988, Taiwan's Ministry of Economic Affairs (MOEA) earmarked a total of US\$170 million for three 5-year plans aimed at developing industrial design in Taiwan and improving the quality and Image of Taiwan-made products.

Taiwan industry has strong manufacturing but still needs product innovation. Taiwan government should establish step-by-step, a National Design Policy, a Design Information Centre and, a Design Museum. When the Government and public consider design as an important factor, manufacturer's competitiveness

should improve continuously ;

When manufacturers possess design research and technology, product life cycle would be extended further. Design changes product, product changes manufacture, manufacturers improves the economy. The cycle not only gives manufacturer development improvement and economic strength, it also has endless push potential.” (M. L. Ho, 1999)



3.3 USA

After the II world war, USA became a superior great economic and trade country. Even the U.S. still has not established its national design policy till this day. However, throughout the active promotion of designers, the U.S. still has exerted its influence on the global design arena as far as U.S. design strategies and practices are concerned . The design in the United States, beside the IDSA, (Industrial Design Societies of American), the NEA (National Endowment for the ARTS) is the main power and also the most important organisation in the United States (**Design Art, 1994**).

The National Endowment for the Arts, (NEA) an independent agency of the Federal Government, was created in 1965 to encourage and assist the nation's cultural resources. The Endowment is advised by the National Council on the Arts, a presidential appointed body composed of the Chairman of the Endowment and twenty-six distinguished private citizens who are widely recognised for their expertise or interest in the arts. The Council advises the Endowment on policies, programmes, and procedures, in addition to making recommendations on grant applications.

The mission of the NEA is:

- 1. To foster the excellence, diversity, and vitality of the arts in the United States.**
- 2. To help broaden the availability and appreciation of such excellence, diversity and vitality. (Design Art, 1994)**

Thomas Jefferson once said that design represents the ability to plan, execute, and communicate; represents the power to create solid objects. But it was not until the beginning of the 20th century when design became a profession . Industrial design began to win people's recognition after the works of Raymond Loewy and Henry Dreyfuss Ford Breuer and Eames were marketed in the 1930s. In the 1940s, graphic design, a branch of advertising design, became a field of its own. In the 1950s, Yale University included courses of graphic design.

In 1972, the Nixon Administration implemented the Federal Design Improvement Programme under the NEA. Under this programme, only the best design should be applied in federal programmes. The NEA then received instructions to coordinate all agencies concerned to improve design quality of various federal projects.

The projects included:

- A. The Federal Architecture Project

- B. Federal Graphics Improvement programme Expert designers review graphic design, works, periodicals, and visual communications media, and help over 60 federal government agencies improve their graphic design.
- C. The program "Excellence Attracts Excellence
- D. Design Awards Programmes
- E. Exhibition " From Mars to Main Street American Designs, 1956-1990"

Exhibitions at the American Architectural Museum of federal designs touch on how these designs affect people's daily lives, and on how design has created new solutions to social and economic issues, which has roused people's interests. In 1983, the Reagan Administration set up the Presidential Design Awards Programme to honour outstanding contributors of federal programmes in such fields as architecture, engineering, graphic design, relics preservation, interior design, industrial design, and urban design and planning. The awards were presented every four years. In 1988, the National Endowment for the Arts implemented the Design Arts Program. It cooperated with the University of Michigan to study design's role in U.S. enterprises. The purpose of this research is to study how to most effectively apply design as a development strategy of an enterprise, improve product and service quality, and help enterprises to win out in international competitions. This research lasted for five years and completed case studies. This was the first time the U.S. studied in-depth the operation of design in enterprises. The objective was to convince owners of U.S. enterprises that design investment is sound and absolutely necessary.

In 1992, the Presidential Design Awards was sidelined because of political implications. President Bush, bidding for his re-election, maintained a distance from the NEA on purpose. The headquarters of the Clinton presidential campaign, on the other hand, invited scores of experts and scholars to discuss design's role in raising U.S. competitiveness and in reshaping the cultural landscape at Little Rock City. The participants suggested at the meeting that a U.S. Design Council be established. This move received resounding support from design circles. The independent presidential candidate, Ross Perot, broke the traditional way of campaigning, used strong visual effects to get his messages across to voters. Political parties have since followed his trail in applying this new tool of communication with voters.

In 1993, Clinton became U.S. president. At that time U.S. products met with strong competition on world markets and lost battle after battle. The Clinton Administration held the view that national competitiveness should be strengthened. As a result, the value of design was re-evaluated. The NEA sponsored an international design seminar in June, 1993. The topic of the seminar was: "Harnessing the Power of Design: Directions for the Future **(Seminar NEA, USA, 1993)**". Participants included influential figures from industry, government, enterprise, and educational circles and the media. They discussed the establishment of a design promotion organisation in the U.S. to integrate all design promotion organisations in the U.S. and thereby all design forces. Executives from the Taiwan Design Promotion Centre **(Paul Cheng, 1993)**

under China External Trade Development Council, the British Design Council, **(Ivor Owen, 1993)** the Nagoya international Design Centre, **(Kazuo Kimura, 1993)** the Danish Design Centre, **(Jens Bernsen, 1993)** and the Barcelona Design Centre **(Mai Felip, 1993)** were also invited to attend the seminar and share their experience. During the three-day discussion, participants suggested that the U.S. government should establish a design agency responsible for design development in order to raise industrial competitiveness.

For if we look at the design / quality model as a new way to think about, organise and improve who we are, what we make and what we do; then continuous improvement of a product readily translates into lifelong learning for an individual, leading to the ongoing advancement of a civilisation. The means, therefore, the goal is not design, But building design into our nation's culture. This a conclusion by **Maria Cullen (1993)**:

After the presentation, the representatives of the European countries, Japan and Taiwan and USA divided into four working teams to draft their own recommendations for mission, structure, activities and funding.

The four scenarios of the four working groups can be summarised as following:

Team *1 (Arnold Wasserman USA.1993)

American Design Development Office (ADD); aim to create an environment for influencing design quality in a private / public partnership to improve America's industrial competitiveness and social inclusiveness.

Team *2 (Don Rorke USA. 1993)

U.S. Design council (USDC); aim to increase US competitiveness through the promotion of design excellence. Design improves competitiveness, increases quality and leads to the creation of new jobs.

Team *3 (Katherine McCoy USA. 1993)

National Design Partnership (NDP); aim to promote the recognition of design innovation as central to the continuous reinvigoration of the nation's global competitiveness, prosperity and quality of life and work; and to develop a collaborative infrastructure to insert design at the core of an integrated product development process in public and private organisation from local to national levels.

Team *4 (Tom Hardy USA. 1993)

U.S. commission on Design, Technology & Innovation (DTI); aim to integrate design processes in government and industry to stimulate economic growth and environmental quality goals, reshaping the American economy for the post-cold war era and fostering communication between industry and government.

After the conference / work shop, which lasted about two weeks, Thomas B. Grooms (**NEA.USA.1993**), the programme manager of Fender Design improvement, USA, sent a letter of thanks to Taiwan for Mr. Paul Cheng. In the letter, Groom states that he expects the US government of Clinton to make design an integral part of its economic policy. (Appendix 7: **NEA, USA, 1993**)

The four options all stressed the importance of raising U.S. Industrial competitiveness, promote economic growth, and improve the quality of people's lives. In the organisational structure, the options were setting up an independent federal agency, or placing it under the Ministry of Commerce. These options all have the support of a huge advisory group composed of government officials and entrepreneurs. The choice of the head of the said government agency includes the Vice president, principal of university, and president of corporation. The important functions and activities of the said government agency include:

- A. Studying design cases and demonstrate design's solid contribution to economic growth, improved quality of living, and environmental protection;
- B. Planning design education for the whole country and raising the general public's awareness of design's importance;
- C. Establishing a computer data bank and centre of resources and sharing information on computer network;
- D. Offering assistance to regional and cross-state design activities;
- E. Protecting intellectual property rights;

- F. Stepping up research on design management;
- G. Editing and publishing a design yearbook;
- H. Setting up more design awards and stepping up publicity.

The government agency also has the following financial options. It can totally depend on government funding, or only at the initial stage apply for government funding, but lower the scale of government subsidies and increase self-raised funding year after year. In the process of its establishment, it should require government approval before establishment, prepare detailed action plans, win support of the industry, the congress, government agencies, and map out detailed organisational structure, activities and functions, and a progress report.

At the end of 1993 the National Endowment for the arts presented a report on the seminar held in June of that year. In this report it pointed out that design is a national resource. Its potentials have not been fully tapped in product, communication, and environmental protection. **(NEA / DAP1993);**

- A. From the economic perspective, design can improve competitiveness of U.S. products, streamline the production process, and make appropriate adjustment in the human and technological interface, thus bringing about prosperity and increasing job opportunities.
- B. From the environmental perspective, design plays an important role in

safeguarding a clean, safe and long-lasting environment. It is making a great contribution in recycling, pollution control, and mapping out long-term utilisation strategies for natural resources and land.

C. In terms of living quality, design could provide a healthy living and working environment.

D. In terms of social responsibility, design is a tool to ensure a common sharing of resources, with no sexual, racial and cultural privileges.

These topics were being studied by the federal, state, and local governments, companies, professional groups, and education and research institutes. Although much manpower and resources were put into design, their efforts were not organised. Some messages on the values of design never reached influential persons. The integration of plans and strategies was difficult. The opportunities provided by design resources were not really utilised in the U.S. After seeking the opinions of many relevant persons and organisations, they believed that the U.S. should establish a design promotion organisation. The structure of the organisation required further research and investigation. The blueprint on the structure of the design promotion organisation was as follows:

A. Objective

The fundamental objective of this organisation was to publicise, promote and

apply good design, which were important resources in invigorating the economy. Special emphasis was placed on design being a contributor in the upgrading of the competitiveness of U.S. products, and the idea of design being able to improve productivity through its active role in product development, production process, visual communications, communication skills, and innovations for a better living and working environment.

A major task of the organisation was to integrate all resources and set up clear goals. On the other hand, the strong leadership of the organisation should take into consideration the wider aspects of issues such as the environment, living quality, and social events that concerned people's daily lives in reviewing the economic performance.

Raising the country's competitiveness and productivity were issues of great concern to enterprises, companies, professional groups, groups of special interests, and the general public. These economic factors attracted the interest and wide support of government officials and businessmen. This organisation should combine the limited resources and meet their needs.

B. Organisational structure

The organisation should be an independent government department so that it would be easier to cooperate with other organisations and exert its influence. Its staff should be kept to a minimum, but be capable of responding quickly to

emerging issues. It should also be run like an enterprise. An advisory committee should be established, and composed of entrepreneurs, leaders of labour and design, chambers of commerce, universities, educators, and government officials from the Ministries of Commerce, Defense, and Transportation, and the Congress.

C. Activities

The two major tasks of top priority were: 1. Designing a communication network of design resources and ideas 2. Providing technical assistance to small and start up organisations. Other tasks included establishing an awards system for outstanding design innovations and plans, designing design curriculum for middle and primary schools, promoting outstanding designs in the federal government, supporting local design activities, and formulating strategies for showing design's values in environmental and social issues.

In addition to the above-mentioned activities, studies into the connections between activity planning, the objectives, and employee's responses; budget; and opportunities to cooperate with other organisations should also be conducted.

D. Funding

Fifty percent of the budget should be borne by the federal government, with all funding being borne by the federal government at the initial stage. This

arrangement could demonstrate the importance of the organisation and its national standing. In addition to federal government funding, the organisation would also accept private donations. The income from membership fees would be used to sponsor activities and some special projects. Other income would include donations from particular activities and state governments, subscriptions to and sales of periodicals and other services.

E. Measures for the organisation's establishment

At the initial stage of establishment, an advisory group composed of representatives from industry, labor, education and design circles should be formed to study the structure and objectives of the organisation. The advisory group should have good communication links with the Vice President, and highly influential government officials in the USA. It should convince them that the organisation will play an indispensable role in government plans to promote industrial growth, upgrade design and rebuild the government.

The design circles were deeply concerned about the progress of the organisation. But in an election the *Democratic Party* lost. The *Republican Party* then had the power to boycott the Clinton administration's plan to reinvigorate the economy through design. At the presidential election held in 1996, President Clinton won re-election. But after the congressional race the Democratic Party remained as a minority party. The plan then was again boycotted. The design circles never gave up, but put in much more effort to win support from all sides.(NEA, USA,1997)

Conclusion : USA

United States is a major economic and trading country. However they have still not established a national design policy. Design in the USA is lead by the National Endowment for the Arts which is the most Influential organisation.

In 1993 a "blueprint" plan was established for design promotion. This has the potential to be successful if it is supported by the US Government.



3.4 Canada

3.4.1. Postwar Period Was the Beginning – Design in Canada

Canada's design industry did not effectively begin until after World War II, when new activities and events gave birth to the country's industrial design profession, and links with industry were established. The first educational department for industrial design opened in 1945 at Toronto's Ontario College of Art. The National Association of Canadian Industrial Designers was established shortly thereafter. During this period, the federal government helped unite design and industry. C.D. Howe, the Minister of the reconstruction of the day, enacted policies to redirect the war industries to domestic markets. As part of reconstruction program, the government established both the National Research Council and the National Design Council.

Buchanan's recommendation that the government sponsor a multi-design promotion center, modeled on the British Design Council, resulted in the formation of Canada's National Industrial Design Committee in 1948. This federal agency promoted the benefits of product design to manufacturers and consumers. Together with its successors ----the National Industrial Design Council and Design Canada ---- it established scholarships, provided research grants, produced newsletters, conducted lecture series, created publications, compiled a Design Index, issued annual awards, and opened exhibition centers in Ottawa, Toronto, and Montreal. Nineteen sixty-seven, the year of Canada's 100th birthday and Expo 67 in Montreal, was a high point for design in Canada.

Though the 1970s and '80s were periods of rapid growth in Canada, few policy-makers were concerned about the future of Canada industries. Design Canada was closed in 1985. (From Hewers of Wood to Creators of Value : **Design Management Journal Summer 1993**).

3.4.2. Canada's Renewed Interest in Design

Today, the tide is beginning to turn. All levels of government are at least talking about the value of design innovation in building Canada's new economy. The most recent document was produced in February 1993 in Ontario. Entitled "Ontario 2002: A Report of the Task Force to Review the Ontario Technology Fund" this impressive report outlines a vision for the future built on an innovation-based society. But, the usual problems arise: understanding the need for change is easy, action still lags behind.

Now, there is a new player with the ability to help turn policy into action: the Design Exchange (DX) (Figure 3.5).

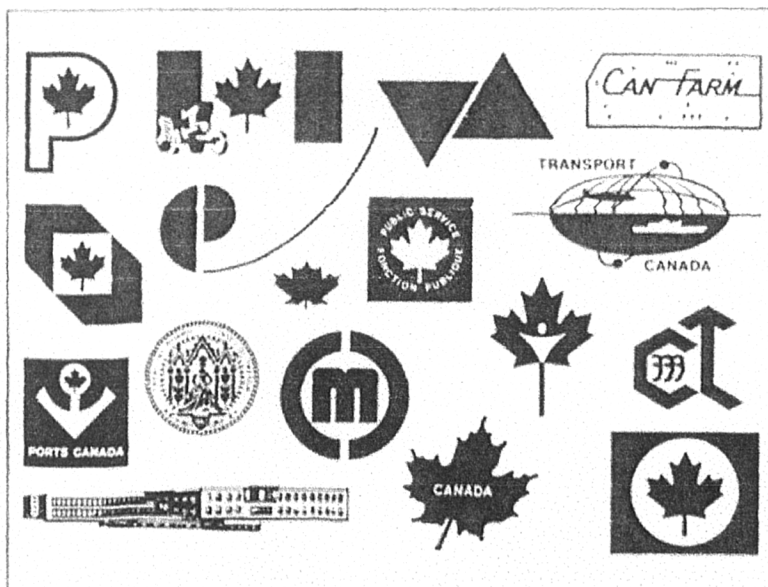


The DX organisation in Canada is a government established design promotion agency, with an enthusiastic and confident workforce. Canada was able to host the 1997 ICSID conference with the support of the Mayor of Toronto. DX organisation used to be one of Canada's largest supporters of using design as a means of improving trade competitiveness.

IT'S NOT A COMPREHENSIVE national design policy but, as Alan Way points out, the Canadian government's Federal Identity Programme creates a clear graphic profile for government activities. This has several significant benefits, including

facilitating access to services and programmes, improving the effectiveness and reducing the cost of communications, promoting the equality and official status of the French and English languages, and explicitly recognising the value of design as a management tool (Way 1993).

1. A 1969 Task Force on Government Information report that the Canadian government was failing to make its presence known to its citizens, and that important federal programmes were being carried out without public awareness of federal sponsorship. One of the findings in its report, "To Know or Be Known," was that federal government organisations did not project uniform, clearly identifiable images as functional parts of the same government. Many organisational titles failed to distinguish clearly the public from the private, or the federal from the provincial. Furthermore, through the use of different symbols---many of very poor design---each organisation identified itself as a separate entity (Figure 3.6) It was almost as though the government had gone into hiding.



(Figure 3.6) A sample of the symbols used in government prior to the Federal Identity Programme in 1970.

2. The FIP Is Created in 1970:

As a result of the Task Force's findings, the Federal Identity Programme (FIP) was created and announced in the House of Commons on 23 October 1970. Because 125 different organisations of the Government of Canada were visually represented by many different identities and symbols, standardisation and clear identification of federal activities were cited as the main objectives of the FIP. Information Canada, a governmental central-information agency, was made responsible for developing and implementing the programme. Today the Canadian Government has one coherent graphic identity with three corporate symbols (Figure 3.7). As with most corporate identity programmes, the Federal Identity Programme is based on the use of Corporate symbols together with organisational titles, and the resulting corporate signatures (Figure 3.8).



Figure 3.7 The Coat of Arms, the flag symbol, and the "Canada" wordmark are the corporate symbols of government in 1993.

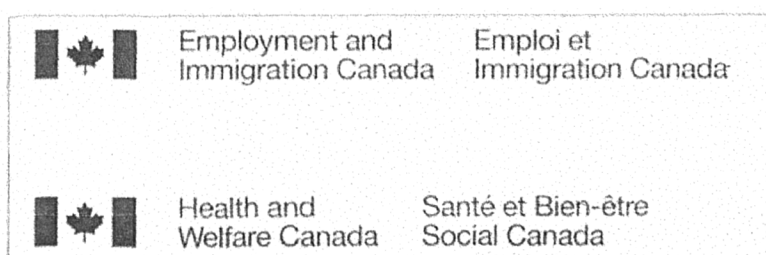


Figure 3.8 Corporate signatures identifying institutions as part of the government.

In the '80s the Federal Identity Program underwent several reviews, which eventually resulted in the replacement of the federal emblem (bar-and-maple-leaf) by the Canadian flag symbol, and this combined with the "Canada" wordmark are the corporate identities of the Government of Canada. (Figure 3.9)

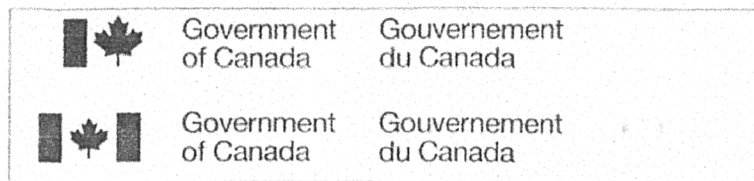


Figure 3.9 The signature evolved from the 1971
bar-and-maple-leaf symbol to the 1987 introduction of
the flag symbol.

Conclusion : Canada

The FIP (the Federal Identity Programme), was made policy in 1978, however, compliance became mandatory, except for a very few institutions which are exempt. The policy requires that federal institutions manage their corporate identities within the framework of the policy and in accordance with design standards, while identifying their activities clearly and consistently in accordance with their own communications strategies. FIP policy objectives are the following:

- 2-1 To enable the public to recognize clearly all federal activities by means of consistent identification.
- 2-2 To improve service to the public by facilitating access to programmes and services.
- 2-3 To project equality of the status of the two official languages, consistent with the Canadian Charter of Rights and Freedoms, and Official Language Act.
- 2-4 To ensure effective management of the federal identity consistent with government-wide priorities, and to achieve savings through standardisation.
- 2-5 To promote good management practices in the field of corporate identity and information design.

Canada's choice of using a maple leaf as their logo has been quite a successful national identity programme. Canada's federal identity programme provides good reference material, it is a good example of the design project by Government. However, due to China's political pressure, Taiwan (ROC) has not been able to establish it's own national identity (the official name of the country and the national flag is not internationally recognised) and an image for it's products. The government in Taiwan has been promoting 5-year design promotion plans since 1989 and has asked local design consultancies and foreign design consultancies (from the UK, France, Japan & USA) to submit proposals of possible strategies. Some results have been seen, but the fundamental problem of a higher national identity has not yet been achieved. However, the two slogans "It's very well made in Taiwan" and "Innovalue" have been quite successful.



3.5 UK

3.5.1 The United Kingdom is the first country establishing Design Council in the world, hence UK design policy influences the other countries.

The British Design Council was founded by Royal Charter in 1944 and charged Churchill's wartime government to promote by all practicable means the improvement of design in the products of British industry (**Owen 1993**). The United Kingdom is the place of origin of the world's design concepts and philosophy. Since 1944, during the two decades after World War II the organisation, function and activity, of the design council include activities to promote excellent designs. This influenced the other countries to follow their lead, promoting excellent product design competition, enhancement of product quality and design quality.

Since its establishment the Design Council has aimed at upgrading products manufactured by its industries. As time and environment change, the Council's organisational structure, strategies and functions have also been renovated to keep up with the technological, economic and social changes.

In 1944 the Council underwent a total design oriented renovation in accordance with the government's economic and trade policies. It helped British enterprises apply design techniques in order to upgrade their competitiveness. The

renovation helped bring economic prosperity and social benefits.

The council is the highest government agency in the U.K. in terms of design and is a key part of the government's effort to promote business, economic, and social development. It serves the following functions:

1. Formulator of design policy associated with the government, enterprises, and other organisations concerned.
2. Promoter of design's contributions, values, and effectiveness.
3. Promoter of design education and training, enabling the U.K. to cultivate the world's first class designers and a new generation with creativity and problem solving skills.

The Council has identified five main groups (**Design Council 1996**) with whom it is working:

1. Business (both large and small companies);
2. Government;
3. Education and training providers;
4. The media
5. Design professionals

The council also has different groups of advisers composed of experts in design, industries, trade, education, and other social circles.

3.5.2 The following are the major tasks of the Design Council: (Design Council Annual Review 1996, Andrew Summers, Appendix 8)

A. Design for competitiveness

Pressured by the strong competition and high economic growth rate of Asian countries, the U.K. has to speed up the process of developing new products and sell them on the marketplace. It will also need to differentiate the market niche of its products. Beginning in 1995, the council has implemented 9 three years research projects and addressed the following issues:

a. Markets

How to understand and capture the needs and future judgement of values of users and markets;

b. Execution Methods

How to evaluate the best way to develop a product;

c. Collaboration

How to improve collaboration, both within and between firms, for better product and service development;

d. Resources

How to plan and use resources effectively- financial, human and technical;

e. Specialist Design resources

How to make best use of specialist design resources to add value to products and services.

B. Design in decision making

According to a survey, opinions of decision-makers of British enterprises are varied in design's role in creating harmony between prosperity and the quality of life. Design is not applied in solely developing new products, but also applied in every aspect of an enterprise's operation.

C. Design in small and medium enterprises

In order to help small and medium enterprises make profit from investment placed on design and innovation, the council is providing design services for the creation of unique products. It has cooperated with the British Ministry of Trade and Industry and other concerned organisations in providing design advisory, survey, and counseling services to such enterprises and help them to produce unique products and differentiate with their competitors.

D. Design and investment

To instill the concept of design as investment and not an extravagant expense into the minds of the investors, the council is conducting research on the benefits of long term investment on design, as well as finding out the reasons for lack of enthusiasm in short term investment in design. It hopes that from this research it will find a way to help the investors make the biggest possible profits.

E. Design and Education

To stress the importance of design in the British educational and training system at various levels and meet future job requirements the council, after has held discussion with more than 350 leaders from the industries, academics, and government. The consensus is that at school the role and functions of design should be stressed, and that design courses should be a part of the universal educational programme. It also gives full support to schoolteachers in teaching design techniques at various courses.

F. Design for international markets

The U.K. is encouraging exports. At present, the export value of two thirds of the British small and medium enterprises account for less than 25 percent of the total export value of the U.K. Sixty percent of these enterprises have no export business. The U.K should sell innovative and high tech products to markets of developing countries.

After careful study, the council points out that in order to expand exports, the British Enterprises should undertake the following tasks:

- a. Understand and pinpoint the needs and future values of overseas markets.
- b. Learn to cooperate with other specialised trades of these markets.
- c. Find out ways to best apply design techniques, improve the design process accordingly and meet the tastes of consumers of overseas markets.

G. Design for environmental sustainability

Environmental considerations at every stage of product development have to be integrated to reduce the impact of the conflict between industrial development and environmental protection and even create additional values. **(Design Council UK, 1996)**

3.5.3 The characteristics of the UK design policy

UK's design policy is integral, nevertheless does not match every country's various demands. However, there are several noteworthy characteristics as follows:

Business Link:

The British Design Council design strategy is like that of Taiwan, the major purpose is to serve for small and medium sized business. Business Link could be regarded as a remarkable characteristic of Design Council. Business Link is the national network of local partnerships between the business community and government, providing the simplest route for all small and medium sized business to obtain the best information and advice to help manufacturers and business grow. (Figure 3.10)



Figure 3.10. Business Link

In the process of providing services for small and medium sized business, Business Link emphasizes:

- Business
- Education
- Government

The above-mentioned three parties are based on cooperative and mutual relation (Figure 3.11):

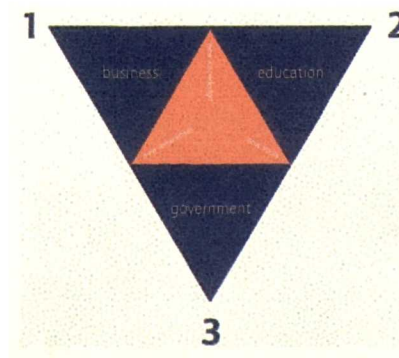


Figure 3.11 The relation among Business, Education and Government. (Design Council, UK, Annual Review 1997)

Design journal:

UK's Design Journal is an important media for design promotion. In each issue of this periodical, it recommends some of the 16000 most important industry sectors, education sectors, and government institutions. Design Journal is an indispensable tool of the UK Design Council for design promotion. In Taiwan since 1979, the Design Promotion Centre of the CETRA-China External Trade Development Council published "Product Design and Packing" which changed into "Design" in 1998. Just like that of UK, this is an important media for design promotion.

Design Management and Business:

Besides the Design Council, U.K also has the London Business School, an educational organisation that combines design and business successfully. The London Business School was founded in 1965; it pursues a balanced excellence between academic and vocational learning which links theory and practice through innovative, rigorous, and relevant teaching and research enhancing managerial effectiveness at all levels.

Established in 1982, the Center for Design management was a world first in bringing the concerns of design into a business school. Its first director, Peter Gorb, pioneered the teaching of design to students on the MBA (Master of Business Administration).

In 1986 the school was granted a Royal Charter in recognition of its national and international stature, and in 1992 received the Queen's Award for Export, an acknowledgement of its increasing provision of educational services to managers and companies worldwide.

Although Industrial Design was introduced to Taiwan in 1961, until 1990 design technology was always a major theme of research field. However by the 1990's, the subject of "Design Management" was gradually being considered by both the design educators and corporations.

Recently, "Design Management" has become one of the main courses of study of design majors in Taiwan. However, the design education and business management education in Taiwan is still looked upon as two separate entities. If the courses of business management could be added to design education, or the design management courses to business management it would increase mutual communication and create a dialogue between the two fields.

The UK's ARIAD is the resource for design researchers:

The Allison Research Index of Art and Design, Known as ARIAD, is a scholarly bibliographic database detailing all aspects of research in art and design completed in the United Kingdom. It is published in a form that renders it readily accessible to potential users, who include policy making and other bodies as well as researchers and practitioners in art and design and related fields (ARIAD 1997).

The database cooperates with the following organisations:

- A. Arts Council of England
- B. Chartered Society of Designers
- C. Council of Subject Associations in Art and Design
- D. Conference for Higher Education in Art and Design
- E. Design Council
- F. Design Research Society
- G. National Society for Education in Art and Design

The design research is gradually becoming a trend in Taiwan as a result the functions of ARIAD should be advocated.

The Design Museum is one of the most important facilities for design introduction:

The UK Design Museum is located within the Bustlers Wharf conservation area in London, within easy reach of Tower Hill station. Visitors of all ages can rediscover the excitement of classic design from the past hundred years in the panoramic top floor Collection Gallery. State-of-the-art innovations from around the global can be found in the Review gallery, as well as a program of critically acclaimed special exhibitions on design and architecture.



Figure 3.12.London Design Museum,
Photograph by Paul Cheng. June 1996

The Design Museum is not only helpful for design professionals , educators and researcher, it also offers an important space to promote design to the general public. Taiwan also needs a permanent design museum, where excellent national and international design work can be collected and displayed to provide a point of inspiration for the future.

The UK government provides significant support for design, and design is regarded as an implement that promotes competition:

Since 1994, the UK government has been emphasising the importance of functional design, and established the Design council. After the Thatcher era in the 1980's, it is known on a global level that design is being taken very seriously in the UK.

When Margaret Thatcher catapulted design into the limelight by becoming the first Prime Minister to invite a bevy of top designers to her office for tea and talks, there was a blaze of publicity for such glamorous guests as Zandra Rhodes, the fashion designer, Terence Conran, the design retailer, and Kenneth Grange, the industrial designer. Almost no one outside the meeting paid any attention to the presence of a group of leading design engineers. It has been the same ever since that seminal meeting three years ago this month. Mrs. Thatcher's Government subsequently promoted the use of design in industry through a series of conferences on the theme of "Design for Profit" (**Financial Times, 1985**).

On 25 January 1982, British Prime Minister Margaret Thatcher held a seminar, at 10 Downing Street, on product design and market success, attended by forty-eight representatives of the design industry, education and government. The aim, as expressed by the Prime Minister, was "to tap the thoughts of successful business". Three themes resulted; the first of which was education. Secondly, it was felt, there was a need to increase top management's awareness of the

importance of good design; the third was the influence that major public-and private-sector purchasers could have on the design awareness of their suppliers.

At the First International Design Forum held in Singapore in Asia 1998, Mrs. M. Thatcher emphasised that: "The theme of the Forum is "Design your Competitive Edge". I have been keen to ensure that the Government gives high priority to a promoting good design in the United Kingdom. In particular we have sought to emphasis the importance of design for our industrial and commercial success in markets both at home and abroad (**Thatcher 1988**).

Overseas trade services: assistance to exporters:

All the industrialised and developing countries want to export their products but the success of these export goods depends on good design and governmental support in its promotion becomes a very important factor. The National Audit Office (NAO) and the *Department of Trade and Industry in the UK*, are the important institutions that promote design. According to the report from NAO in 1995, it pointed out:

1. The Overseas Trade Services make available information, advice and support to United Kingdom companies via a portfolio of 23 services. These services are provided by staff spread between the Department of Trade and Industry Headquarters in London, 13 main offices across the United Kingdom (along with the developing network of Business links), and by Foreign and Commonwealth Office commercial staff based at over 200 diplomatic posts overseas.

2. The National Audit Office examination took place in 1995. They reviewed information held by the Overseas Trade Services on the design, monitoring, operation and impact of eleven of their most commonly used services. Additional detailed information was obtained on seven of these via a survey of exports to four markets in the developing South East Asia region; and this enabled identification of the factors influencing the export process (**National Audit office, 1996**).

From the above, we can see that the UK government supported the exporters.

Taiwan is a country that depends on exportation for its survival. The International Trade Office under the Ministry of Economic Affairs is responsible for the administration and policies within international trade. In 1970, they established CETRA – China External Trade Office. The IDB (Industrial Development Bureau) of the ministry of Economic Affairs and MOEA not only introduced industrial policies to corporations, but also supported and promoted Industrial Design. CETRA of Taiwan has the same goals as that of the Overseas Trade Services of UK.

In 1993, UK held the International Design Congress in Glasgow, and the main theme was “Design Renaissance”. (Chartered Society of Designers, 1993):

ICSID the International Council of Societies of Industrial Design was established in UK 1954. Every two years ICSID holds a worldwide congress for design. In 1993, not only ICSID (International council of Societies of Industrial Design), but also ICOGRADA (International council of Graphic Design Association) and IFF (International Federation of Interior Architecture and Interior Designer) held their congresses in Glasgow, this proves that UK puts an emphasis on participating in international design organisations, and that design is taken into serious consideration. **(ICSID News, Glasgow, 1993)**

The ICSID welcome party for the Glasgow Design Congress held in September 1993 was sponsored by CSD (the Chartered Society of Designers) in the UK and Design Promotion Centre of the China External Trade Development Council (DPC/CETRA), and fully demonstrates the cooperation between Taiwan and the UK on design issues.

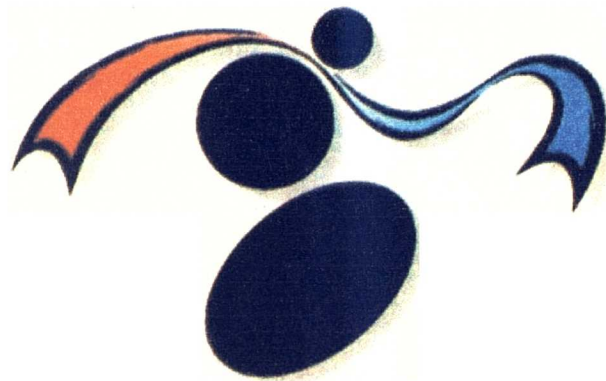


Figure 3.13. Logo of ICSID 1993 organised by
CSD in Glasgow, UK



Figure 3.14. Mr. Paul YJ Cheng from Taiwan
addresses the guests at the welcome
party ICSID 1993 Glasgow.

The idea of design was introduced in Taiwan in 1951 and in 1979 CETRA established the Design Promotion Centre. With encouragement from the Industrial Office, Mr. Paul Cheng participated in the World Design Exhibition in Washington, USA 1985 – a large scale congress attended by a lot of people. In 1989 Mr. Cheng started to lobby for a chance to hold a Design Congress of ICSID in Taiwan and finally succeeded in 1995. Since then, Taiwan has been fighting to keep up with the international design community.

Conclusion: UK

The United Kingdom was the first country to establish a design policy in the world, hence UK design policy influences other countries. There are several noteworthy characteristics of design policy as follows:

- Business Link
- Design journal
- Overseas trade service
- Link with international design organisations
- Design research methodology and design philosophy
- Very strong provision for design education in colleges and universities
- Government awareness of design in the UK initiated by Churchill's wartime government in 1944 and reinforced by British Prime Minister Margaret Thatcher in 1982
- Finally, UK held the ICSID Congress in Glasgow and emphasised the main theme " Design Renaissance ".

The National Audit office (NAO) and the Department of Trade and Industry in the UK want to export UK products overseas.

The success of these export goods depends not only on good design but also on Government support.



3.6 Germany

According to a recent investigation by the German Design Council, there are over 750 design units in Germany. These units include government agencies and departments, foundations, cultural and professional associations, chambers of commerce, universities, centers of technological transfer, libraries, competitions, periodicals, museums, and archives. Every unit will contribute to the promotion of design. If judged in traditional terms, there are 13 design centres in Germany in addition to the German Design Council. The German Federal government has a power sharing system with local authorities. In every state there are design centres. These centres vary in their background of establishment, organisation, financial structure. They also vary in the history of development and major activities.

Bigger design centres, such as those in Stuttgart , Hanover , and Essen, were established scores of years ago. They have won high publicity in Germany and overseas by sponsoring design competitions and exhibitions.

The operational expenses of the Stuttgart Design Centre are being paid under the Baden-Wurttemberg state government's regional economic plan. Most operational expenses of the Hanover and Essen Design Centres are borne by themselves. Functionally these design centres are much like design companies, but they receive limited financial support from state governments.

The international Design Centre in Berlin became famous in 1969 by sponsoring international design exhibitions. After the unification of East and West Germany, the Centre has devoted to the overall economic development through design. The Design Centre, Munich has sponsored activities such as design exhibitions with particular topics and designers, seminars. It also published periodicals. Newly established design centres, such as those in Darmstadt, Bremen, and Keil, have all emphasised on furthering design circles' involvement in regional economic activities in order to promote regional economic prosperity. The German Federal Government has emphasised coordination between newly established design centres and economic and cultural centres.

In the new German Federation only Dresden, Schwerin, and Postdam have established design centres. Although they have contributed to design development, they experience problems of finance. This is a common problem all over the world. Furthermore, the area of the former East Germany lacks the support of the industry. This problem is even tougher to overcome than the area of the former West Germany. Even so, these design centers have sponsored a wide variety of activities, and have served a spearhead.

The Design Forum, Nurberg is making real contribution to regional economic development. In addition, it has in the essence of design won respect for its ecological awareness and support for women's role in design.

The Design Force Training Centre in Bremen is a unique training institute. It runs widely varied training programmes. Its training courses lasting for 18 months are aimed at providing complete courses on product management. For example, designers are trained to play the role of coordinator and communicator in planning, drawing, and production stages.

Another design promotion organisation, the Institute of New Technological Forms, was established in 1952 after the World War Two in Darmstadt. Its main function is to strengthen the cooperation between design, technology, architecture, arts, and social sciences. It is very active both domestically and internationally. It is famous for sponsoring such spearheading design competitions as Schwarzkopt Award and BRAUN Design Prize. **(Braun Prize, 1990)**

Among these design institutes, the German Design Council is the only federal government agency responsible for design promotion for the whole country. In general, design promotion of Germany's design began after World War Two, especially when German began its economic realignment. The objectives then were to reinvigorate the industry and trade, regain international competitiveness, and publicise new design techniques.

3.6.1 GERMAN DESIGN COUNCIL

The German Design Council (Rat für Formgebung) is the national representative body for the promotion of design in Germany. It is a non-profit making foundation inaugurated in 1953 on the basis of a resolution on the German Parliament.

Among its patrons are important industrial and service companies. The German Design Council is also Funded by the federal Minister for Economic Affairs, the Minister for Economic Affairs of the State of Hesse, and the City of Frankfurt.

1. In all its activities, the German Design Council assumes an understanding of design which becomes evident as a thematic system. The individual elements in this system represent focal areas which have the function of providing criteria both for internal organisation and the outward definition of the position of an institution. These individual focal areas are:

- Design as an economic factor
- Design- management
- Design processes
- Communication
- Identity and emancipation
- The European dialogue
- The environment
- Product analysis and the history of design
- Teaching and research, vocational and further training
- The culture of everyday life

2. The central aim of the theme-oriented activities of the German Design Council is to provide industry, business, cultural institutions and the public with guidelines when seeking direction or making decisions on issues of design. It achieves this by means of exhibitions, symposia and design competitions, with its

own periodical (**German Design Council, 1990**) and the support of its own design library, well-stocked and wide ranging periodicals archives, its bibliographical service Literatur –Hinwelse and its comprehensive side archives.

3. The German Design Council is the contact point for international inquiries on all issues related to design and the promotion of design in Germany. It represents the Federal Republic of Germany in the Working Party for Design set up by the European Union in Luxembourg, is responsible for the concept and organisation of Germany's participation in the Triennial in Milan and organized the two awards by the Federal Minister for Economic Affairs, the German Federal Award for Product Design and the German Federal Award for Patrons of Design.

3.6.2 DESIGN ZENTRUM NORDRHEIN WESTFALEN

1. NRW, founded in 1954, has just moved into its new home at Design Park Essen. It is playing an important role in the planning of the park, and the historic industrial building where it now resides combines history with new architectural design to give NRW a special identity both in the park and internationally.
2. Sir Norman Foster used the Box in Box method to build the new structure inside the old one. By doing so, the original building has been preserved, and new architectural design can be added. NRW's designers pay a lot of attention to the decoration of their new home. For example no matter whether on the ceiling, at the corners, or somewhere you don't expect, we can find surprising architectural design and decorative features. (Figure 3.15)

3. The Red Dot. Awarded by NRW to industrial products of outstanding design, is an internationally recognised mark for innovative excellence (Figure 3.16) German export orientated businesses use it to emphasise their design achievements and a large number of foreign manufacturers value it as an effective marketing instrument and aid to gaining entry into the German and European markets. **(Red Dot, 1997)**
4. Nowadays, the focus of NRW's effort has shifted from helping manufacturers solve design problems within the manufacturing process to educating manufacturers how to communicate with customers. In other words, at a time when most products in the market are well designed, telling consumers the stories behind the products has become the key to winning the competition.

Hence, design, communication and quality become the key factors to a products' success. Combining these points effectively requires manufacturers to know more about their products and themselves.



Figure 3.15 Design Zentrum Nordrhein
Westfalen, Germany.

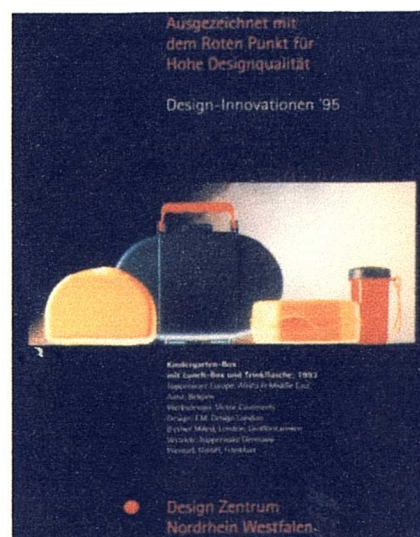


Figure 3.16 The Red Dot. Awarded by NRW
is an internationally recognised
mark for innovative excellence.

Conclusion: Germany

Germany's design promotion, from the establishment of DWB in 1907, the Bauhaus in 1919, therefore, has had a history of over 90 years. The main tasks of the German design policy are to find out ways to promote product design of high quality, to ensure long term effectiveness, and to exert a greater influence on the long term design perspectives, responsibilities, mode of operation, and the design process. The German Design Council and Regional design centres are the major channels and organisations in the execution of design strategies.



3.7 Italy

3.7.1 The father of Italian Design - Leonardo da Vinci

Italian creativity has been recognised since the Italian Renaissance. This creative tradition has had a great influence on fine arts, architecture and modern design and fashion. Italian creativity and practicality can be seen especially in everyday objects such as furniture, lighting, gift & stationary items, transportation vehicles, apparel, jewelry and leather items.

Leonardo da Vinci is considered to be the father of Italian design. Bruno Munari once said in 1987:

"Two different ways to design and communicate. Everyone knows the Mona Lisa, the famous painting of Leonardo da Vinci and everyone also knows the drawings that the same Leonardo made of everyday objects, instruments, machines, and other things that could be classified as design. Therefore Leonardo was the first "Artist and Designer" and his method was very clear, when he painted he was a painter, when he designed he was a designer. In fact his designs for *machines* are not in the same "Style" as his pictures. This is the difference in working method between the Artist and the designer" (Munari, 1987).

According to the three authors – Bruno Munari, Mario Bellini and Andrea Branzi – of the book "Descendants of Leonardo da Vinci – the Italian Design" Italian Design is entering into its fifth generation. The first generation covered the period

between the two world wars and is the beginning of a golden era. The first generation went from the 1920's to the 1950's, comprising the period before and after World War II and is considered the debut of the golden era of Italian design. The second generation included those responsible for the establishment of the era and also for influencing the coming radicalism. The third generation developed that concept, and finally, the fourth generation are mainly the artists who have been setting trends in modern design and architecture since the late '70s. The fifth generation started in the early 1980's with groups such as Alchimia and Memphis which became famous for their specific styles

3.7.2 Design Philosophy in Italy

Italy has no official or national design policy and no design centre (**Editrice, 1992**). However, ADI - The Italian Association for Industrial Design - the most important design organisation in Italy participated in the Singapore international design exhibition in 1992. There are 9 groups representative of Italian design philosophy whom participated in the exhibition.

1. The Rationalist group

Mario Bellini maintains that the rationalist group works in close connection with the rules of the Modern Movement, the Bauhaus and the Ulm School, which means that it tries to express the principles of the form following the function as faithfully as possible. These principles are of Italian figurative tradition.

2. The Historicist group

Paolo Portoghesi maintains that the Historicist group sees history as a scenario where all the necessary aspects of our day-to-day life are represented, you only have to be able to find them: history is the best experimental laboratory that has ever existed. This group's influence is felt more strongly in the field of architecture than that of design.

3. The roots of the Historical Avant-garde group

Alessandro Mendini maintains that the roots of the Historical Avant-garde group can be found in Futurism and in Soviet Constructivism, from which it borrows both the irreverent and provocative, but also the highly communicative attitudes and general aspects that tend to make products dynamic. The group's greatest results have been achieved in reviewing and up-dating materials, such as plastic laminates, recomposed marble, wood inlays, fabrics and ceramics.

4. The pop group

Gaetano Pasce maintains that the pop group is shaped by its relationships with the mostly English and American Pop Art movement. What the group intends to do tends to be an emblematic representation of some aspects of mass culture, exaggerating its contents and/or loading it with ironic effect. The idea of difference is still set hierarchically on a scale of values that allows one to design the values. Inequality no longer establishes any connections, for example, between small and large. Small and large became completely separate universes.

5.The communicational group

The central core of the communicational group is to invoke new thoughts and feelings through images and not concentrate on the usage of the object. Ettore Sottsass maintains that the centre of the group's thought process is the great capacity for communication typical of our times, be it through cinema, television or fashion. This model of thought needs no coherence: it adapts and shapes itself to the prevailing situation as and when the need arises.

Barbara Radice, art director of the Memphis group, writes "the fifth generation of furnishings evokes smoky metropolitan climates a la Blade Runner, or science fiction adventures in the Terminator style, post nuclear heroes and desperadoes who move against a background of burnt-out landscapes, amid the ruins of what we must presume to be the Day after". These are the technological Dark Ages, a no-mans-land.

6. The Minimalist group

Enzo Mari maintains that the Minimalist group is expressed in the term Minimal Art, describing the artistic group that tends to represent the primary aspects of form. Their language is bare, essential, incisive, sometimes corrosive. All these elements are clearly present in minimalist design; Mies van der Rohe's principle that less is more is quite distinct, but so is the principle that every product must be an archetype.

I make no distinction between these two types of production: in the first case ("art"), my objective is the explicit one of declaring the need for a non-subjective value; in the second case ("design"), my aim is the implicit one of recognising the relationships of production as the basis of this work and, as far as form is concerned, of achieving a dignity for it on a par with that of art, i.e. of not reducing it to applied art.

7. The High Tech group

Richard Sapper maintains that this group's principles are constructed on a background of engineering, the emblematic of technology and showing up the bare bones of the structural system of a building or a product.

The group tends to recognise a natural expressiveness in technique, almost, as though there were no need to interpret it. The final result often achieves a high degree of expressiveness.

8. The Experimentalist group

Gae aulenti maintains that this group of designers often search for a direct relationship with the scientific and social aspects of the product, attributing an understandable language to them. In some cases, it uses the design project to highlight the process of how a product is made or research carried out.

Many members of this group work to introduce design culture into public services, in order to improve their formal and performance quality. BI- and tri-dimensional coordinated images are among the themes the group prefers working on.

9. The Neo-rational group

A product shall fulfil the requirement for both form and function and that of creativity and new concepts. Pierluigi Molinari maintains that this group's efforts are concentrated on constantly refining products in their simplicity and elegance, an aim achieved by paying considerable attention to questions of production.

From what we have seen above, we can draw the conclusion that Italian designers are particularly capable of finding their own design philosophy and using it as an effective promotional tool.

3.7.3. Design Exhibitions and Design Awards in Italy

There are a lot of design awards and promotional activities in Italy and the 'Triennale di Milano' is considered amongst them to be the most important exhibition area while 'Compasso d'oro' and 'Smau Industrial Design Award' are the two most important international recognition for designers.

1) *Triennale di Milano*

The first design exhibitions on a national level in Italy began in the 1920's with Triennale di Milano where important design exhibitions are held every three years. An Italian style started to evolve with the 1951 exhibition. The theme of the 1954 exhibition was 'The production of art' and took Italian design towards an artistic and humane direction of development.

The 18th exhibition at Triennale di Milano was held in 1998, up till this date ADI (associazione disegno industriale) was responsible for coordinating the activities of the last 43 years with other institutions such as: Comune di Milano, Trade Development Council of Milan and Regione Lombardia as sponsors.

2) Compasso d'oro

The 'Compasso d'oro' design award is given to the best products every two years and is considered to be a highest recognition for good design. The first awards ceremony in 1954 was held in the Italian department store 'La Rinascente' (Wang, 1997) and held in conjunction with the Triennale di Milano and is one of ADI's most important events.

3) Smau Industrial Design Award

Smau, the international exhibition of Information & Communications Technology, is an important event of the sector in Europe. Created in 1968, the Award is fundamental testimony to the history and development of industrial design in Italy and abroad. The Smau Industrial Design Award was established in 1968, and is presented each year to the *products among those displayed at Smau. They have to be better than others in "functionality, usefulness, user-friendliness in relation to the complexity of the product and technological innovation"*. (Molinari, 1994)

The Award is now recognised as one of the most important industrial design events world-wide thanks to the participation of authoritative international Juries, the endorsement of renowned institutions in the field such as ICSID and ICOGRADA, the close contact with the academic world and increasing number of participants. The passionate and competent contributions of Rondolfo Bonetto, founder of the Award was president of the Jury for eighteen years.

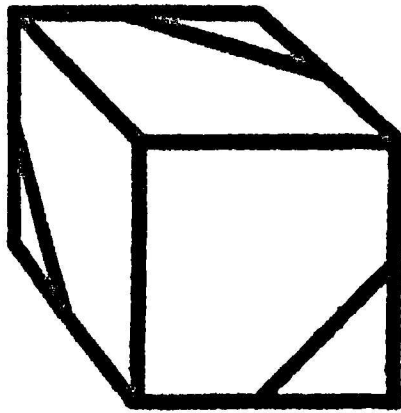


Figure 3.17. Symbol of the Smau Industrial Design Prize



Figure 3.18 Smau Exhibition, Fiera Milano 1998 and two of the juries of the Smau Industrial Design Prize, Paul Cheng and P. Molinari

4) *Grandesign*

The international design exhibition 'Grandesign' (Prina, 1999) is held every fall in the city of Como (north of Milan) it is still quite new and has not yet been fully established on a grand scale.

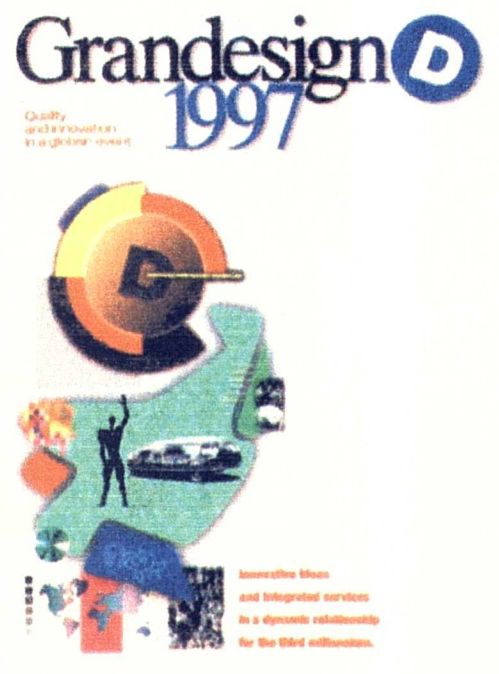
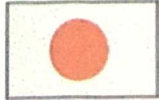


Figure 3.19

Conclusion: Italy

Italy is famous for design: the main reason is the long history of Italian creative tradition that has had a great influence on modern design and fashion, especially in daily objects.

Italian designers have succeeded in establishing their own Design Brands and philosophy. For example, ADI, the Italian Association for Design, participated in the Singapore international design exhibition in 1992. There were nine groups representations of Italian design philosophy who participated in the exhibition.



3.8 Japan

Japan is the most outstanding and concerned country in all of the Asia countries. After World War II, Japan started developing and promoting design activities. In 1973, Japan held the Design Congress of the ICSID in Kyoto, which was the first Asia country to host the worldwide congress. In 1989, Japan held Design Congress of ICSID in Nagoya again, and it was recorded as being on the greatest international. This has resulted in Japan attending international design status. Tokyo, Osaka and Nagoya have become the three design cities in Japan.

Japan has influenced Taiwan very much. In 1979, the Taiwanese government has supported CETRA to establish the Design Center, and worked on design for internationalisation actively. Finally, Taiwan held the Design Congress of the ICSID in Taipei in 1995.

3.8.1. Design Policy in Japan

After having held the Design Congress of the ICSID in Kyoto 1973, the global design world started to notice Japan and Asia, and to investigate the difference between orient design and west design. Furthermore, the design world and government of Japan started asking themselves what is the next step for Japan? Therefore, the design strategies and policies have been developed gradually. Until 1989, by the cooperation of the design world-corporations and government of Japan, the greatest worldwide design congress was held in Nagoya, including seminar and exhibition. The global design world was much impressed. The Japanese national design policy was set up in 1990, and refined to completion in 1990 (MITI 1990). The policy aims to project and execute the policies from MITI-The Ministry of International Trade and Industry. According to the material announced by MITI in 1997, the main points are as follows:

3.8.2. Japan and Design Policy

The Ministry of International Trade and Industry (MITI), Japan, is actively promoting domestic design improvement while supporting international design exchange activities and other design improvement policies (MITI, 1997).

3.8.2.1. Design Promotion

1. Design Promotion -- System

a. National level system

The Design Policy Office of MITI is responsible for the creation and comprehensive coordination of design promotion.

Two promotion organizations, JIDPO [Japan Industrial Design Promotion Organisation (Tokyo)] (Masahiro Oishi 1994) and JDF [Japan Design Foundation (Osaka)], actually carry out the policies under the guidance of the Design Policy Office. Further organisations such as the Japan Industrial Designers Association and the Japan Graphic Designers Association have been created in each field.

b. Regional level

At the prefecture and major-city level, industrial groups, etc. include a person in charge of design administration. In addition, the Research Service Agency of each prefecture or city employs about five designers for the main purpose of guiding small and medium-size companies.

In some prefectures and cities, Regional Design Centers are responsible specifically for design promotion. At present, there are only around twenty such centers.

Further, in major cities such as Nagoya and Yokohama, the establishment of large-scale design centers combining citizen education, reassert, design industry integration, etc. is progressing.

2. Design Promotion -- History

a. Design Promotion

Design administration at the national level considers into which fields and places the introduction of design (knowledge and methodology) would enrich society, and then introduces design to those fields and places.

The Design Department of MITI (Ministry of International Trade and Industry) Japan was established in 1958, and has developed continuously since its establishment more than 40 years ago. (*Figure 3.20*)

b. History

Design administration and design promotion in Japan can be divided into the following three broad periods:

1. Export promotion stage (from 1950 through the mid-1979's):

Design was introduced.

2. Quality- of- life improvement stage (late 1970's through 1980's):

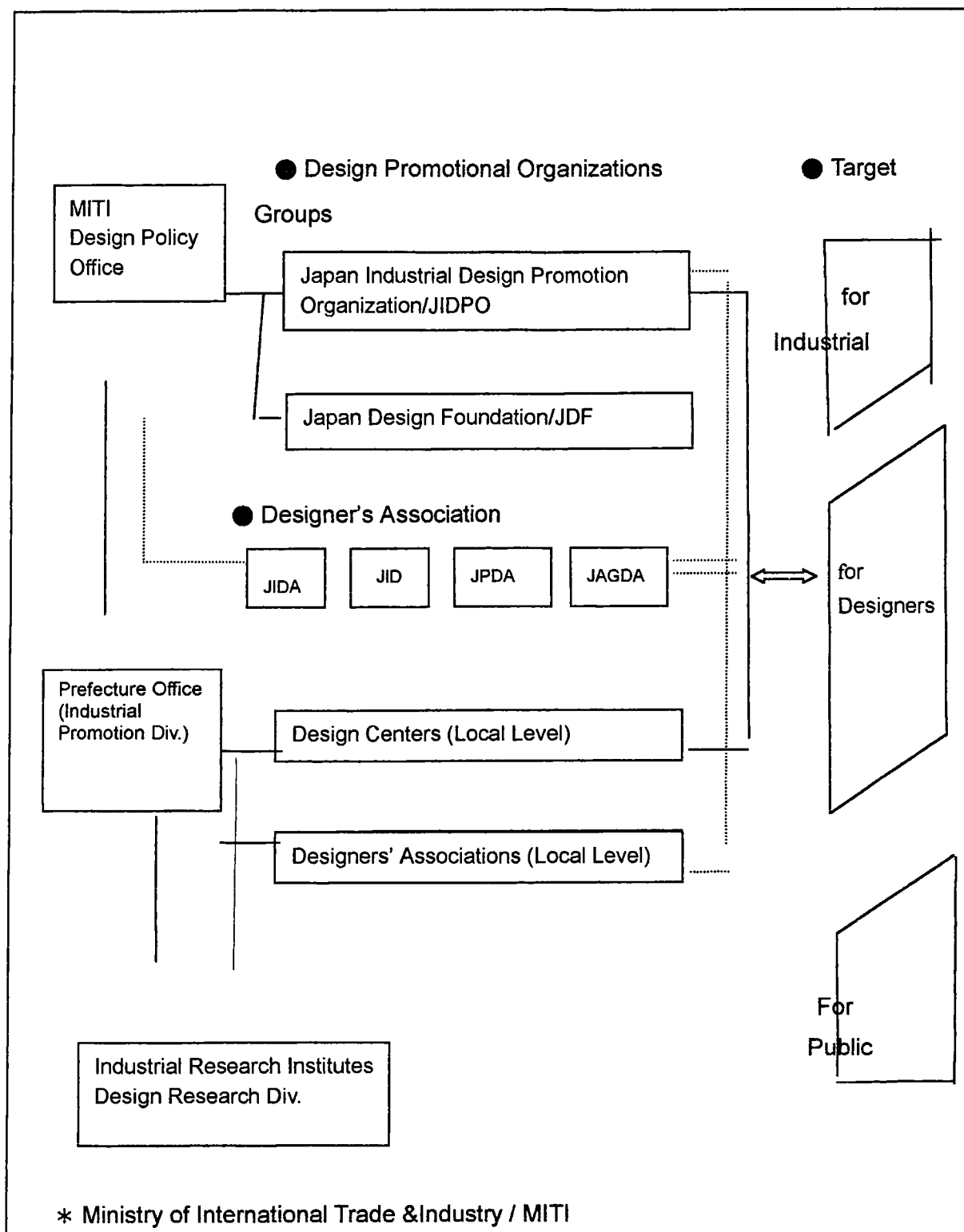
The introduction of design to not only daily goods but also to capital goods and public goods was promoted.

3. Design industrialization stage (from 1990's):

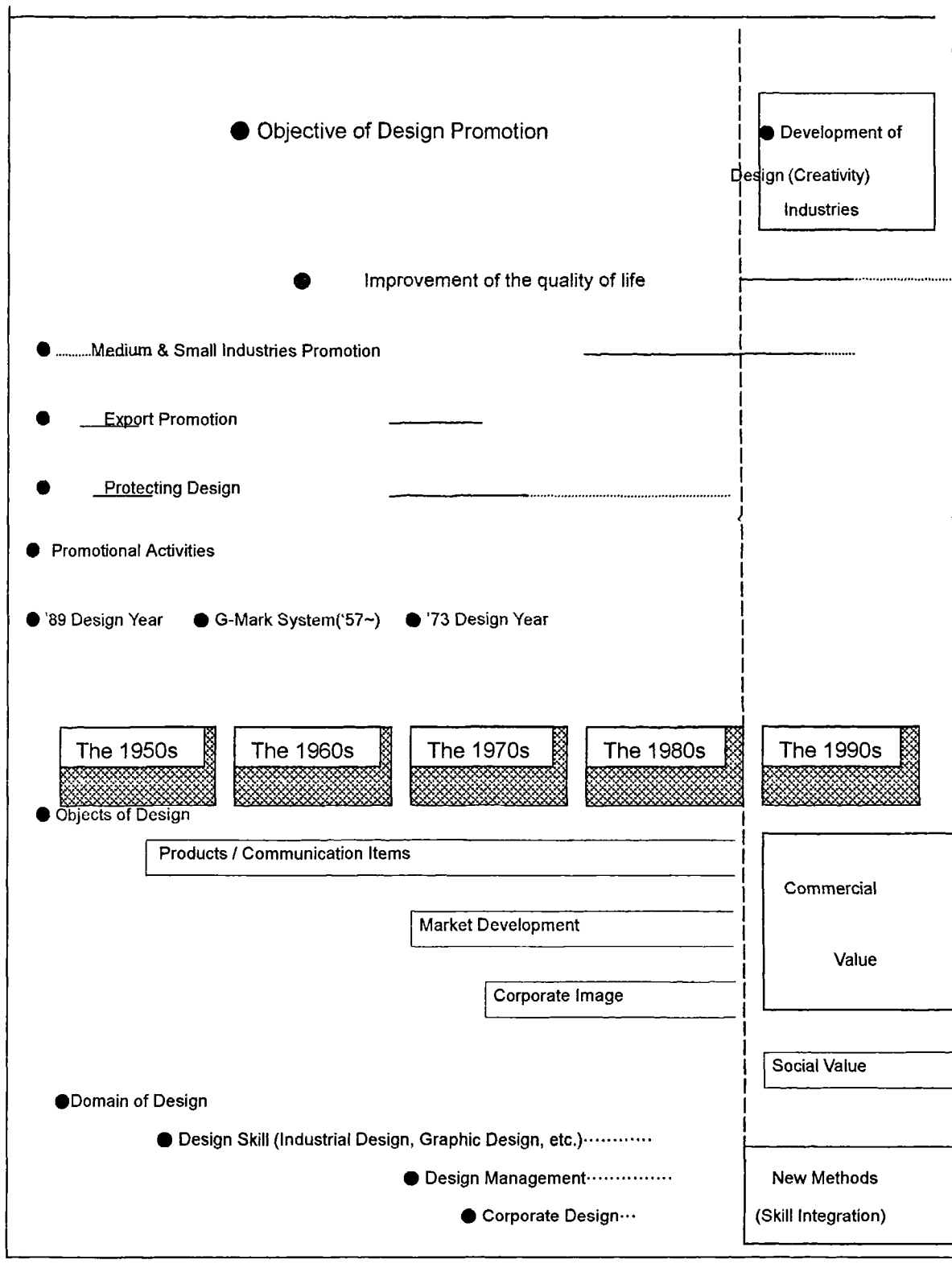
The design industry was nurtured and rearranged as a key industry for the opening of a new era.

A national "Design Year" was a feature of the transition points between each period.

(Figure 3.20) Design Promotion Systems in Japan (MITI, 1997)



(Figure 3.21) Development of Design Promotion (1955~1990's) (MITI, 1999)



3.8.2.2. Design Organisation and activities

1. Cultivation of design expert - The design Personnel Development Centre

In November 1993 the Design Personnel Development Center was established within the Japan Industrial Design Promotion Organization to conduct a wide range of training activities. The center is used to train and develop personnel who can assume the task of creating the next generation of design. This training is developed along the following four principles.

2. Improving the Design Capability of Small and Medium-size enterprises

In Japan, many small and medium businesses still operate on an orders-received production system, and rarely conduct their own product design and development or technological development. In the environment, it is imperative to reinforce smooth introduction of effective means of developing highly original products, and to strengthen development skills. Japan is therefore implementing the above design personnel training scheme to strengthen design and development skills, and promoting full-scale use of facilities affiliated with the Small and Medium Enterprises Agency.

3. Promotion of regional design

The International Design Center opened in Nagoya on November 1996 (**Kazuo Kimura, 1996**). The Center is the first of its kind in the nation to receive authorisation as a design creation supporting institution under the Private Participation Promotional law. Its purpose is to promote establishment of new industries and boost local industries through improvement of regional design research capabilities and research and development type corporate training in design.

4. International Cooperation Through Design

a. International design festival.

To develop Japan as a beacon for modern design and a forum for international exchange, to emphasize to the world the cultural dimension of Japan's industrial activity, and to foster understanding and appreciation for design among the general public, the Japan Design Foundation has presented the International Design Festival every other year since October 1993 (**Japan Design Foundation 1997**). The International Design Festival consists of an international design competition, an international design award, and an international design exhibition.

b. Asia pacific design conference and exchange programs

The Asia Pacific Design Conference was established in 1990, and the Japan Design Foundation's Asia Pacific Design Network, established in Dec. 1993, conducts a wide variety of design related exchange activities (**Japan Design Foundation 1998**). Because the Network is particularly active in responding to requests for cooperation on design matters from countries of the Asia Pacific region, it plays a central role in Japan's international cooperation through design.

c. Exchange activities with overseas students studying design in Japan (established in 1994).

The foundation provides forums for exchanges of opinions with overseas students studying design in Japan and opportunities for those students to observe design facilities in Japan.

d. Further Expansion into the World of Design

Selecting Good Design (G-Mark) Products and using the G-Mark system (Figure 3.23) of selecting well-designed products and facilities which display excellence in design enables selection and nomination of products for awards. Under this process, some 22,443 products have been approved from 1957 to 1996.



Figure 3.22 Architect's rendering of the international Design Center in Nagoya

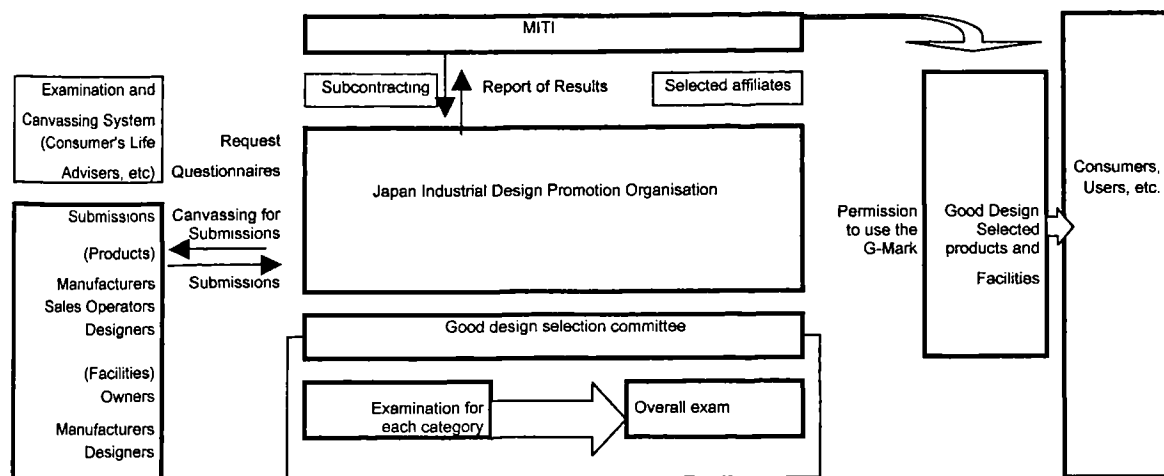


Figure 3.23 The G-Mark product selection process
(MITI, 1997)

Conclusion: Japan

After World War II, Japan started developing and promoting design activities. In 1993, Japan held the design congress of the ICSID in Kyoto, in 1989. Japan held international design congress of ICSID in Nagoya again, and it was recorded as being the greatest international design conference to-date. Japan established a National Design policy in 1989 and refined it to completion in 1990. The strategy of the policy comes from MITI – The Ministry of International Trade and Industry.

MITI established the design promotion system in Japan and also established the G-Mark (Good Design Award) product selection process to upgrade product image and quality for the international market.

The Ministry of International Trade and Industry (MITI), is actively promoting domestic design improvement while supporting international design exchange activities and other design improvement policies.



3.9 Korea

The design world and government of Korea have actively used the power of design to promote their competitive advantage in products for export and international trade affairs. Not only did they study the development of Japanese design, but also the five-year design plans and the realization of design promotion of Taiwan.

MOTIE-the Ministry of Trade Industry & Energy of Korean government has played an important role in establishing their domestic design strategies and policy. According to MOTIE/Korea, the main points of its policy are as follows:
(MOTIE, 1996)

3.9.1. Current Status of Design in Korea

The difference of value added can be as big as 10 fold according to the design.

- Export price from Italy to Japan is 3-4 times higher than that from Korea to Japan.

Public recognition of and private investment by companies in industrial design is quite weak in Korea, and the design level is behind that of major competitive countries as well as those of advanced western countries.

Design level of Korea is 50-60% of advanced countries and 80-90% of major competitor countries.

In a recent questionnaire survey to executives of design departments in manufacturing companies by MOTIE Korea shows that the influence of design on the sale of products is around 70-80%, and the present design level of Korea is around 50-60% of those advanced countries.

Table 3.1 The influence of design on the sale of products and present design level

| classification | Degree of importance of Design | Present Design Level |
|------------------------------|--------------------------------|----------------------|
| Automobile | 70~80 % | 40~50 % |
| Household Electric Appliance | 70~80 % | 50~60 % |
| Apparel | 50~60 % | 50~60 % |
| Stationery | 80~90 % | 70~80 % |

Notes)

1. 'Degree of Importance of Design' means the ratio of the importance of design in the factors for sale increase such as the material of the product, technology, marketing capabilities, design, etc.
2. 'Present Design Level' is the comparison with advanced countries, placing the design level of advanced countries at 100.

Industrial design in Korea faces many problems in establishing infrastructure for supplying professional designers, design firms, and basic research and information system.

79 departments in 62 universities and 118 design institutes are producing 30,000 designers annually. The design industry is short of professional designers with capabilities required by the industry. Accordingly they have to be retrained after joining a company, for 6 months to 3 years maximum.

3.9.2. Design Policy and Design Promotion Plan of the Korean Government

Occupational synopsis of Industrial Design Policy Division (MOTIE):

In recognition of the importance of design, MOTIE of Korea established the 'Design Policy Division' as a branch of the central government to take charge of organised and comprehensive design promotion policy.

This new division will support design development based on a 'Five year Design Development Plan' (**Design policy, Korea, 93-97**)

Establishment of 'Design Centres':

MOTIE of Korea plans to expand the existing Korea Institute of Industrial Design and Packaging (KIDP) –established in 1970, under the new name of Design Center in the year 2000. This center will incorporate professional organisations including the Industrial Design Promotion Institute, the Industrial Design Research Institute, and the Graduate School of Industrial Design to be responsible for promotion, research, and dissemination of information, training of designers and other related matters.

- Exhibition halls, information centers, standing exhibition marts and an international convention center will be established in this center.

This centre will be under construction from 1997 to 2000 in the Kangnam area of Seoul. A total 163.3 billion won will be invested for the establishment of this building, and in the 1997 budget another 27.3 billion was requested and awarded to the authorities of MOTIE of Korea.

- In 1997, 27.3 billion invested in the purchase of land, in 1998 46 billion invested for the basic construction work with another 46 billion in 1999 for further construction work and a final 44 billion will be appropriated in 2000 for the final touches and purchase of equipment.

Fostering Professional Industrial Design Firms:

The number of industrial design firms is approximately 876, while only 68 of them are certified by MOTIE, Korea.

The number of designers and equipment lag behind those of advanced countries.

(* The number of industrial design firms in Japan is around 3,000)

MOTIE Korea plans to support fostering of design firms through various measures. First, MOTIE will expand participation of design firms in the 'Industrial Design Development Project' which can bring a closer connection between industries and design firms.

Reform and Improvement of Industrial Design Protective System:

In the era of the WTO system, there is an increasing possibility that advanced countries such as the EU may utilise design as a trade barrier.

- As part of efforts to cope with the issue of intellectual property rights the EU announced regulations in 1993 for the purpose of creating EU design rights affecting the whole area of the EU and the International Standardised Trade Mark Law came into effect in the EU in 1996.
- MOTIE has organised and managed the 'Industrial Design Protective System Research Committee' from 1995 and has held several public hearings and discussed with related agencies such as the Industrial Property Office.
- In particular, through consultations with the Intellectual Property Office, MOTIE of Korea plans to improve the industrial design protective system through reform of Patent Law within this year.

Therefore, MOTIE Korea is carrying out various measures to heighten international recognition of Korean industrial design and to expand international exchanges in this area.

- MOTIE of Korea plans to host General Assembly & Congress of International Council of Societies of Industrial Design (ICSID) in the year 2001, which is the most authoritative international event in the field of industrial design.



(Figure 3.24) The new industrial design center, Korea.

Conclusion: Korea

The Government of Korea has actively used the power of design to promote their competitive advantage in products for export and international trade affairs.





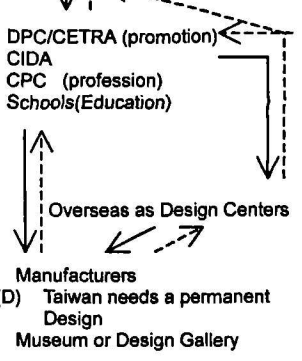
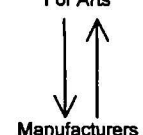
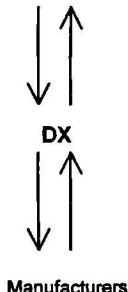
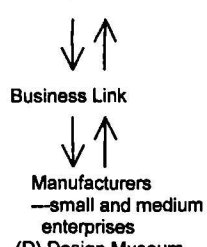
MOTIE- the Ministry of Trade Industry and Energy of Korean Government plans to host the general assembly and congress of ICSID in the year 2001. It is ambitious to promote design activities by design groups, and gives subsidies and support .



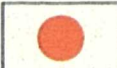

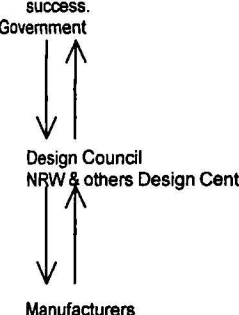
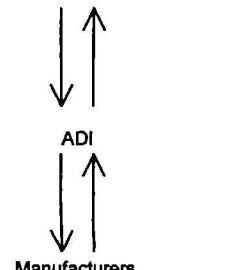
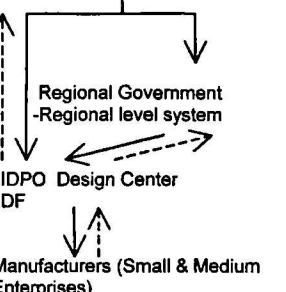
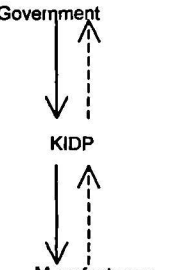
No doubt, Korea is the strongest competitor with Taiwan.

Chapter 3 Literature Review - Comparative Study









3.10 Analysis of findings

Worldwide national design policy's current situation (Figure 3.25)

| Items | Countries | 1. Taiwan  | 2. USA  | 3. Canada  | 4. UK  |
|---|-----------|---|---|--|--|
| 1. Design Organization (Association or Design center) | | <ul style="list-style-type: none"> • DPC(Design Promotion Center) /CETRA 1979 • CIDA—China I.D Association • CPC—China Productivity Center | <ul style="list-style-type: none"> • IDSA—Industrial Design Societies of American | <ul style="list-style-type: none"> • Canada National I.D Council in 1948 • Design Canada was closed in 1985 • New organization: DX—Design Exchange 1993 | <ul style="list-style-type: none"> • British Design Council 1944 |
| 2. Supported by | | <ul style="list-style-type: none"> • Government: Industrial Development Bureau/ MOEA—Ministry of Economic Affairs | <ul style="list-style-type: none"> • NEA—National Endowment for the Arts 1965 | <ul style="list-style-type: none"> • Toronto City Government and Canada Government | <ul style="list-style-type: none"> • Government — The Ministry of Trade & Industry |
| 3. Joining Int'l Design Association | | <ul style="list-style-type: none"> • ICSID 1985 | <ul style="list-style-type: none"> • ICSID | <ul style="list-style-type: none"> • ICSID | <ul style="list-style-type: none"> • ICSID—1954 Int'l Council of Societies of Industrial Design |
| 4. Design Award | | <ul style="list-style-type: none"> • G-Mark • Product Excellence (National Award of Excellence) | <ul style="list-style-type: none"> • Good product design & Engineering, Chicago | | <ul style="list-style-type: none"> • Good Design Award — excellent design |
| 5. National Design Policy | | Already supported by the Government to be established | Trying to be established | Trying to be established | Already established |
| 6. Design Policy — Strategic Development & Implementation | | <p>(A) 5 years Design Plan (since 1989) Two slogans are focused on establishing a National image: 1. It's very well made in Taiwan 2. Innovalue—Innovation +added value Taiwan also wants to establish the Int'l image as Silicon Island.</p> <p>(B) Promotion: Design Journal</p> <p>(C) Government IDB/MOEA</p>  <p>(D) Taiwan needs a permanent Design Museum or Design Gallery</p> | <p>(A) Make Design an integral part of its economic policy</p> <p>(B) IDSA↔NEA National Endowment For Arts</p>  <p>Manufacturers</p> | <p>City Government</p>  <p>Manufacturers</p> | <p>(A) Business Link is the national network emphasized relationship between: 1. Business 2. Education 3. Government, and 4. The media , and Design professionals</p> <p>(B) Promotion: Design Journal</p> <p>(C) Government •The National Audit Office and Department of Trade & Industry (London) • The Foreign and Commonwealth Office</p> <p>Design Council</p>  <p>Business Link</p> <p>Manufacturers —small and medium enterprises</p> <p>(D) Design Museum</p> |

| 5. Germany  | 6. Italy  | 7. Japan  | 8. Korea  |
|---|---|---|---|
| <ul style="list-style-type: none"> • The Germany Design Council (Rat für Formgebung 1953) • 13 Design Centers, Stuttgart, Hanover, Essen, Berlin, Munich & others | <ul style="list-style-type: none"> • ADI— the Italian I.D. association | <ul style="list-style-type: none"> • JIDPO—Japan I.D. Promotion Organizations • JDF—Japan Design Foundations | <ul style="list-style-type: none"> • KIDP—Korea Institute of I.D. and Packaging 1970 |
| <ul style="list-style-type: none"> • Government <p>— Federal Minister for Economic Affairs and The city of Frankfurt</p> | | <ul style="list-style-type: none"> • Government: The Design Dept. of MITI (Ministry of Int'l Trade and Industry) 1958 | <ul style="list-style-type: none"> • Government: MOTIE— The Minister of Trade, Industry and Energy. |
| <ul style="list-style-type: none"> • ICSID | <ul style="list-style-type: none"> • ICSID | <ul style="list-style-type: none"> • ICSID | <ul style="list-style-type: none"> • ICSID |
| <ul style="list-style-type: none"> • The Federal Award product design • The Red Dot Award | <ul style="list-style-type: none"> • Triennial di Milano • The Compasso d'Oro 1954 • Smau Award 1968 • Grandesign 1995 | <ul style="list-style-type: none"> • G-Mark | <ul style="list-style-type: none"> • G-Mark |
| <p>Already established</p> | <p>Non national design policy (with the use of private design associations to establish design concepts)</p> | <p>Already established</p> | <p>Already supported by The Government to be established</p> |
| <p>(A) Design Council: Design as an economic factor, and design management, Provide industry business, culture institutions and the public with guidelines of design</p> <p>(B) NRW: Design, Communication and Quality The key factors to provide success.</p> <p>Government</p> <p>Design Council NRW & others Design Centers</p> <p>Manufacturers</p>  | <p>(A) Established the Italian design philosophy by ADI: More intelligence. Less material. Less fatigue. More quality of life.</p> <p>(B) ICE—Italy external Trade Institute and regional governments</p> <p>ADI</p> <p>Manufacturers</p>  | <p>(A) Set up Design Policy in 1990 by MITI—The Ministry of Int'l Trade and Industry</p> <p>(B) Design Policy:</p> <ol style="list-style-type: none"> 1. Cultivation of design experts. 2. Improving the Design Capability of small & medium size enterprises. 3. Promotion of regional Design and Int'l Design cooperation. <p>(C) Center Government—National level system</p> <p>Regional Government—Regional level system</p> <p>JIDPO Design Center JDF</p> <p>Manufacturers (Small & Medium Enterprises)</p>  | <p>5 years Design Plan (since 1993)</p> <p>Government</p> <p>KIDP</p> <p>Manufacturers</p>  |

Principal, strengths and weaknesses of the each country (Figure 3.26)

| |  Taiwan |  USA |  Canada |
|-------------------|---|--|---|
| Strengths | Government support design activities. 5 year Design Plans (since 1989) Focused on established national image-1) Island of technology 2) Innovalue-innovation + value. | NEA-National Endowment for the Art support some of the design activities. Multi-culture with various design concepts Strong technology with attractive international market. | Regional Government support design programme. |
| Weaknesses | No concrete national design policy. Manufacturers still need innovation/design. | Try to establish national design policy supported by Government. | Need to establish national design policy supported by Government. |
| |  UK |  Germany |  Italy |
| Strengths | Established national design policy. Excellent Design Council. Well-known in design philosophy & methodology. | Established national design policy. Government support national level design activities. Design council & centres are well-operated. | Professional design group, ADI-Italian Design Association very organised & active. Very creative in design philosophy & brand names. |
| Weaknesses | Many SME's not always satisfied with government support. | Possibly too systematic. | Need to establish national design policy supported by Government . |
| |  Japan |  Korea | |
| Strengths | Centre & Regional government fully support & promote design activities. National design centre & museum established in 1996. | Government support design activities. Try to establish design centre in 2001 | |
| Weaknesses | | No concrete national design policy. | |

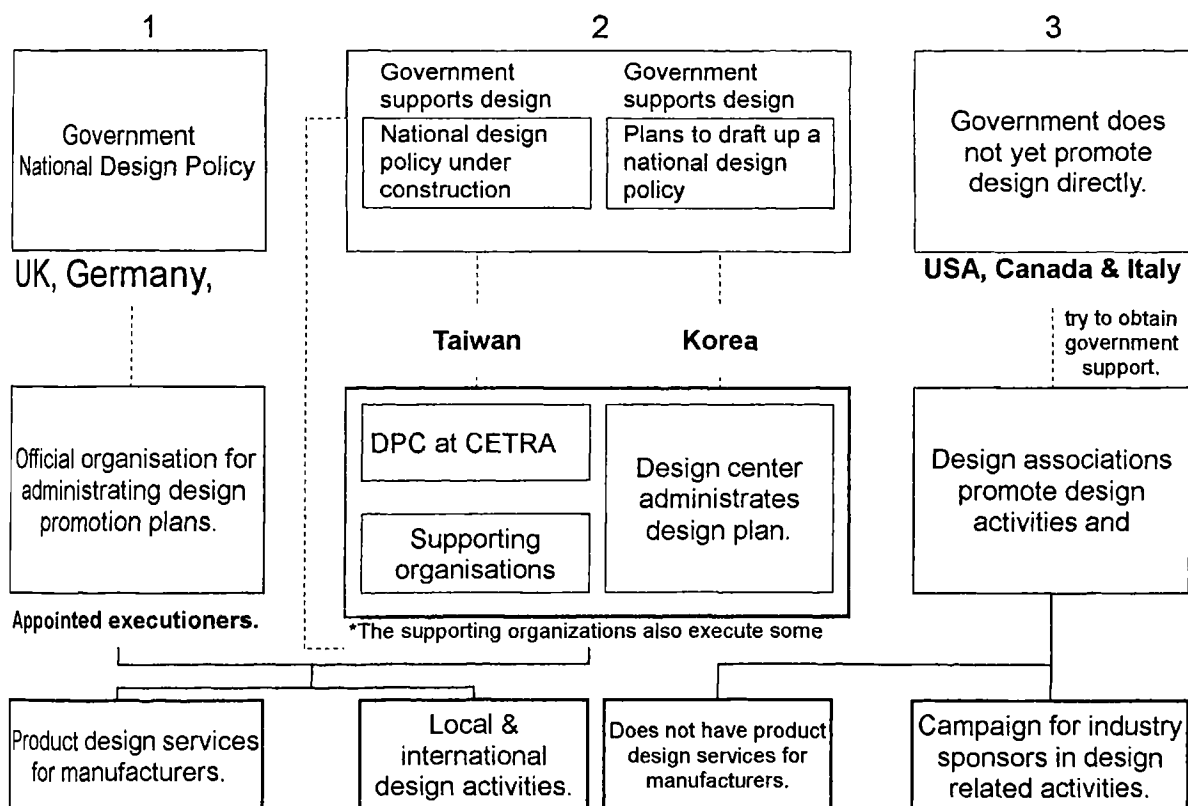
Commentary discussion of important new findings

According to a study of the worldwide national design policy's current situation (Figure 3.25)– Literature review – Comparative Study it is concluded that the various national design policies can be divided into three categories as follows:

A comparison chart of Taiwan and various national design policies

| | | |
|----|---|----------------------|
| 1. | Clear national design policy already established. | UK, Germany & Japan. |
| 2. | Government supports various design-related activities and of a national design policy is under construction. | Taiwan & Korea |
| 3. | Government does not yet establish a national design policy (government already supports some design related activities) | USA, Canada & Italy |

Flow chart of various national design policies:



UK, Germany & Japan :

All of the design activities are support by their Government. However, the culture and environment are different between European countries and Asia.

Japan in extending and encouraging their export system with well designed products;

Japan is the most outstanding and achieve country in all Asia.

UK and Germany have an excellent culture and outstanding leadership of design concepts and therefore influence other countries.

USA, Canada & Italy

They organise the international design's activities successfully. However, all of three countries still have no National design policy supported by Government. Thus establishing the channels between the design organisation and Government is an important issue for them.

Taiwan and Korea

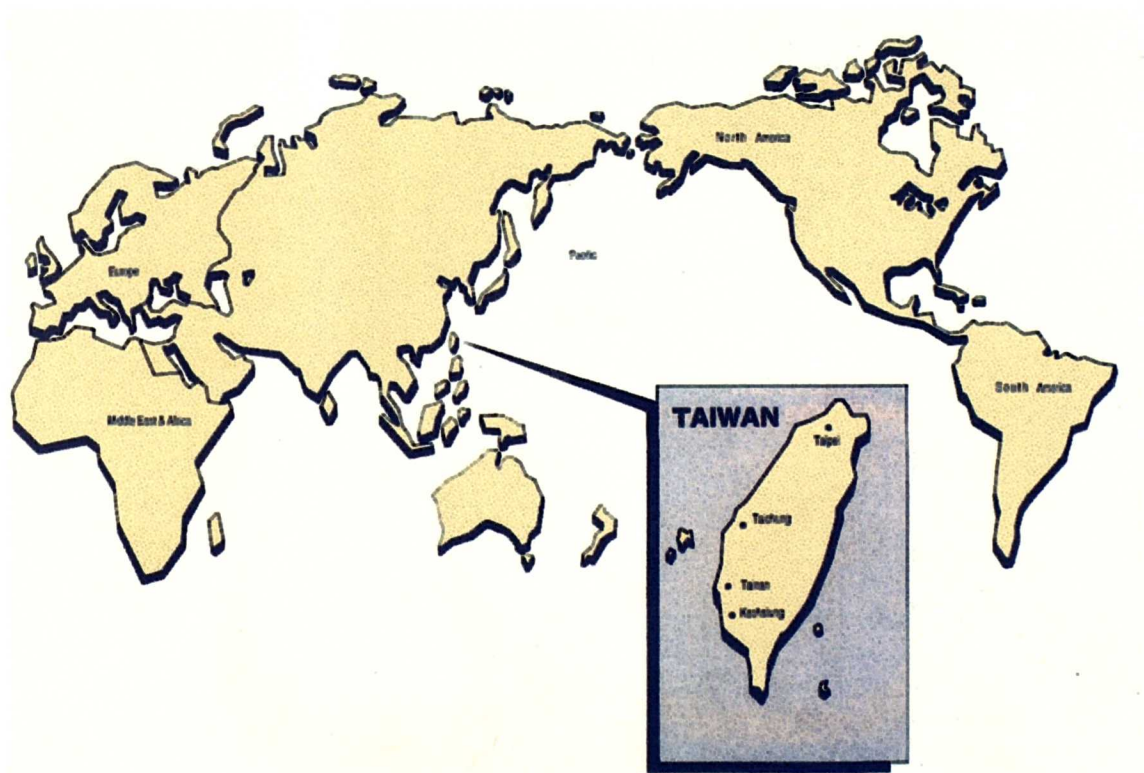
Most of the design activities in these two countries are support by government.

However, both of the countries do not have a concrete National design policy.

Design companies, manufacturing circles, scholars at design education institutes and government agencies need interaction in both Taiwan and Korea.

A model for the strategic implementation of design policy in Taiwan

Chapter 4 Survey of Design Strategies Development and Implementation in Taiwan



A model for the strategic implementation of design policy

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| 4.4.4 | Government Agencies | 242-249 |
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.Chapter 4 Surveys of Design Strategic Development and Implementation in Taiwan

4.1 The Purpose of the Surveys

From the comparative study given in Chapter 3, it can be seen that the interaction and cooperation among the government agencies, professional design fields, design educational institutes and industries are very important. In countries such as the United States and Italy, the design industry has always been able to maintain a close relationship with the production industry and has also worked towards obtaining government endorsement for some of design related activities.

The UK is the first country in the world to establish a Design Council and a National Design Policy. The Design Council has identified the following groups with whom it is collaborating:

1. Large and small companies
2. Government Agencies
3. Education and Training providers.
4. Design Professionals.

Industrial Design in Germany and Japan is developing steadily under the support of their government. While in Taiwan, the "Five-year Plan to upgrade Design" laid down an important foundation for a national design policy.

Since 1979, the government of Taiwan, R.O.C. has actively helped industries develop new products. In 1989, the Industrial Development Bureau (IDB) under the Ministry of Economic Affairs (MOEA) implemented "The Five-year Plan to Upgrade Industrial Design". By the end of 1999 – after ten years of work – time has come to better understand the industries' design philosophy, their practice of design strategies and their design requirement. We also need to understand

the practice of design companies, design educational institutes and their relationship with the government, It is for the reasons above that we are conducting this survey of Taiwan's design strategic development and implementation. We will analyze the results, which will serve as a reference in drawing up the model of Taiwan's design policy.

The purposes of this survey are:

1. To understand the problems facing **the industries in product design and development**, placement of design talents, corporate management and market competition, and to find out in what way the government can help them.
2. To understand the problems facing managers of **design companies** when introducing design concept to their clients, including manufacturers and the government, as well as their countermeasures.
3. To understand the problems facing scholars at **design educational institutes** in curriculum planning and teaching, and to find out whether the talents they trained are meeting the requirement of corporations and the nation as a whole.
4. To understand the experience and future practice of **the government** in promoting design.

4.2 Targets of the Survey

4.2.1 Chosen sample targets

The subject of the survey contains 4 main groups:

1. domestic manufacturers
2. design companies
3. design educational institutes
4. government agencies and relevant organizations in charge of design promotion

The subjects of this survey are those who have participated in government design consultation and guidance projects, including:

1. Managers and marketing directors of manufacturers and trading companies, directors of design departments, and designers
2. Managers of design companies, designers and salesmen
3. Scholars with design background, who have participated in the government sponsored design projects
4. Officials at IDB and other relevant design promotion organisations.

From 1994 to 1999, there were about 200 manufacturers, 60 design companies, 66 scholars with a design background who participated in the government-sponsored design projects. About 20 high-ranking officials from IDB, China External Trade Development Council, China Productivity Centre, China Industrial Designers Association, Taiwan Footwear Research Institute, and Taiwan Fashion Color Association also took part in the projects.

4.2.2 Method used for the Surveys

The following chart indicates the numbers of samples for each subject category of the survey, who participated in the projects from 1994 to 1999.

| Subject | Samples delivered | Expected number of returned samples |
|--|-------------------|-------------------------------------|
| Manufacturers | 200 | 50 |
| Design Companies | 48 | 20 |
| Scholars | 66 | 30 |
| Government Agencies and Relevant Organisations | 20 | 10 |
| Total | 334 | 110 |

4.3 Questionnaire

The four main categories are as follows:

4.3.1 Domestic Manufacturing circles (Appendix 9)

4.3.2 Design Company (Appendix 10)

4.3.3 Scholars at Design Education Institutes (Experts in Design Consultation and Diagnosis (Appendix 11)

4.3.4 Government Agencies (Including relevant design Organisations) (Appendix 12)

4.4 Analysis of Findings

Expected and actual result of the questionnaire.

| Subject | Samples delivered | Expected number of return samples | Actual number of returned samples | Return rate (compared with expectation) | Return rate (compared with delivered samples) |
|--|-------------------|-----------------------------------|-----------------------------------|---|---|
| Manufacturers | 200 | 50 | 44 | 88% | 22% |
| Design Companies | 48 | 20 | 15 | 75% | 31% |
| Scholars | 66 | 30 | 28 | 93% | 42% |
| Government agencies and Relevant Organisations | 20 | 10 | 8 | 80% | 40% |
| Total | 334 | 110 | 95 | 86% | 28% |

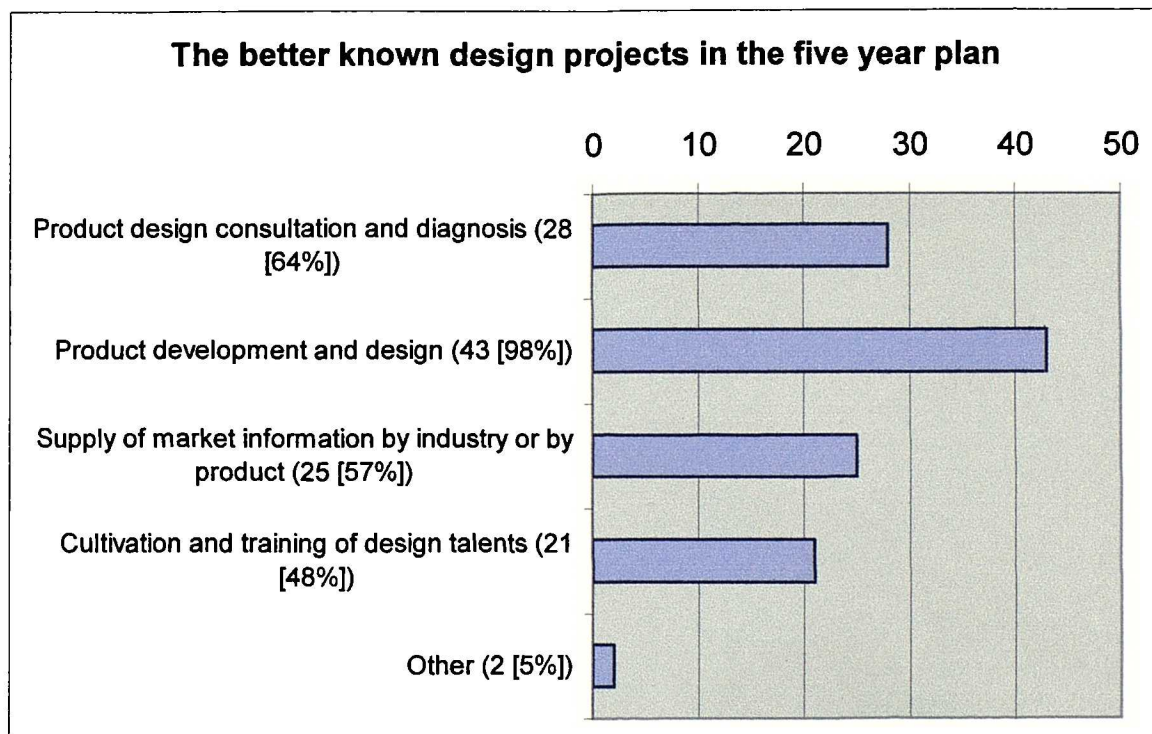
4.4.1

Domestic Manufacturing Circles

Note: The percentage is calculated by 44 questionnaires.

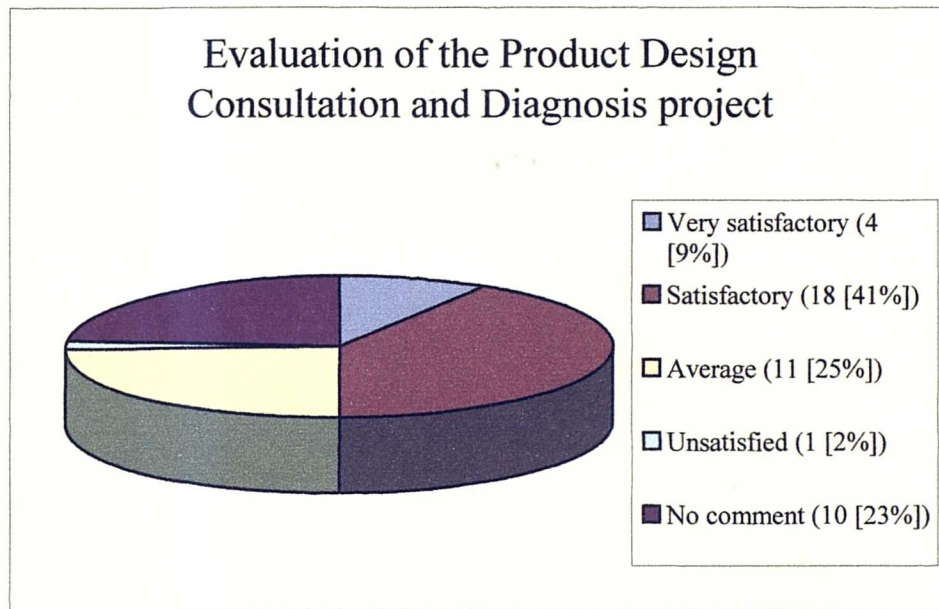
1. The following design projects are included in "The Five-year Plan for the Overall. Upgrading of Product Design (1989-1994, 1994-1999)," which the government (the Industrial Development Bureau under the Ministry of Economic Affairs) has entrusted CETRA to execute.

Please check the one(s) you have knowledge of. (Multiple Choice)



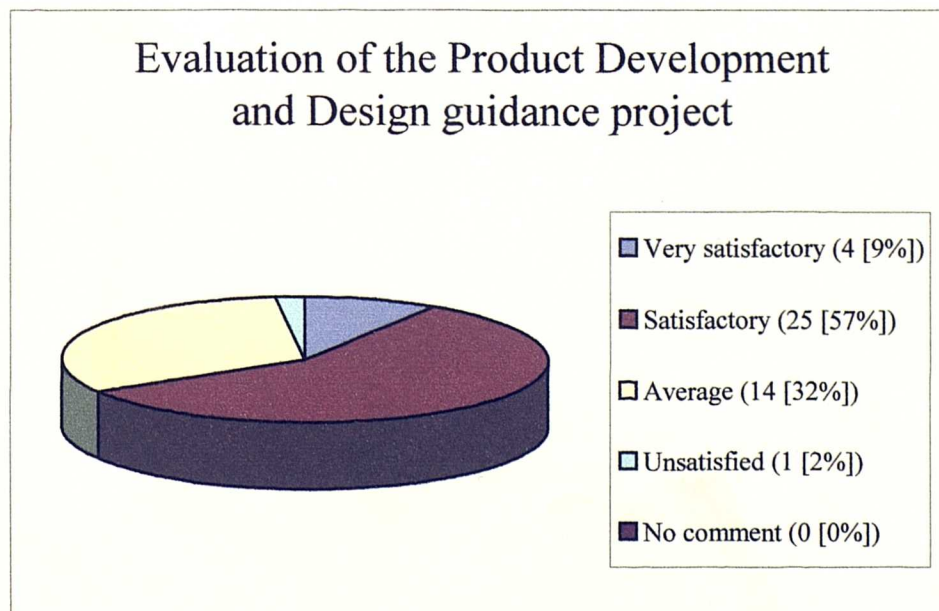
*Others include: 1. Conference for increasing competitiveness of industrial design
2. Industrial cooperation project. .*

2. Please evaluate the results of the following government-sponsored design projects. (please check, multiple choice if necessary)

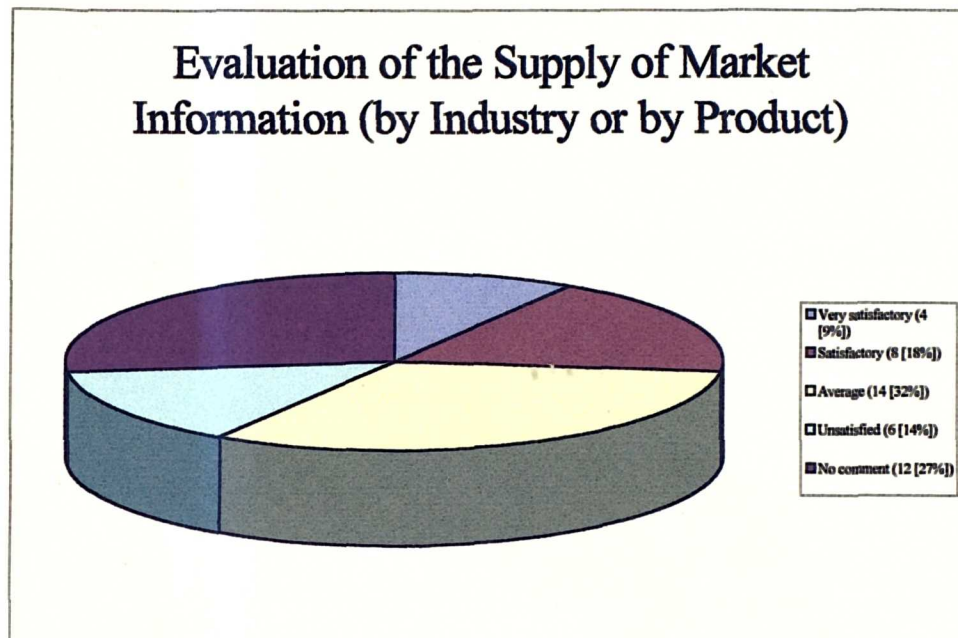


① Product Design Consultation and Diagnosis

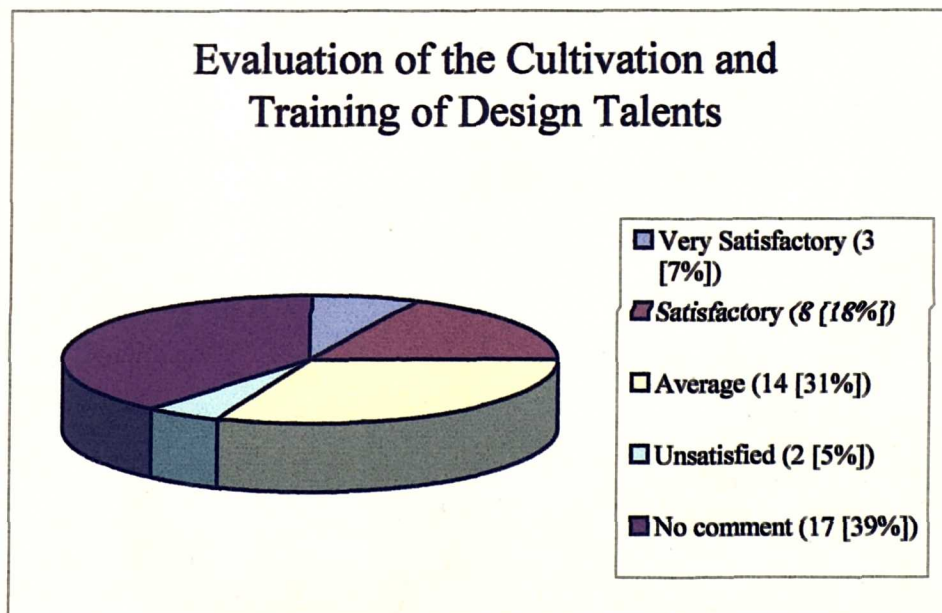
② Product Development and Design guidance



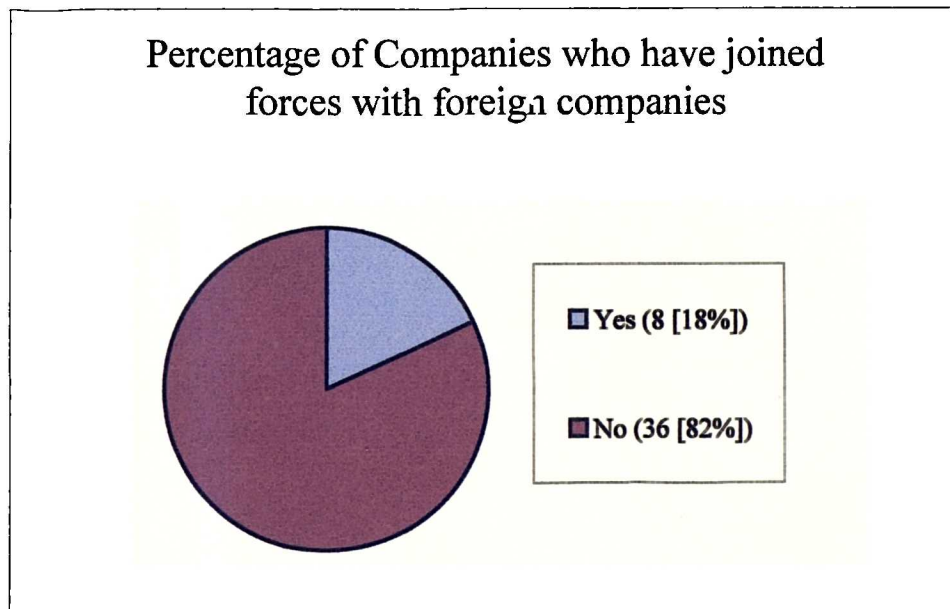
③ Supply of Market Information (by Industry or by Product)



④ Cultivation and Training of Design Talents

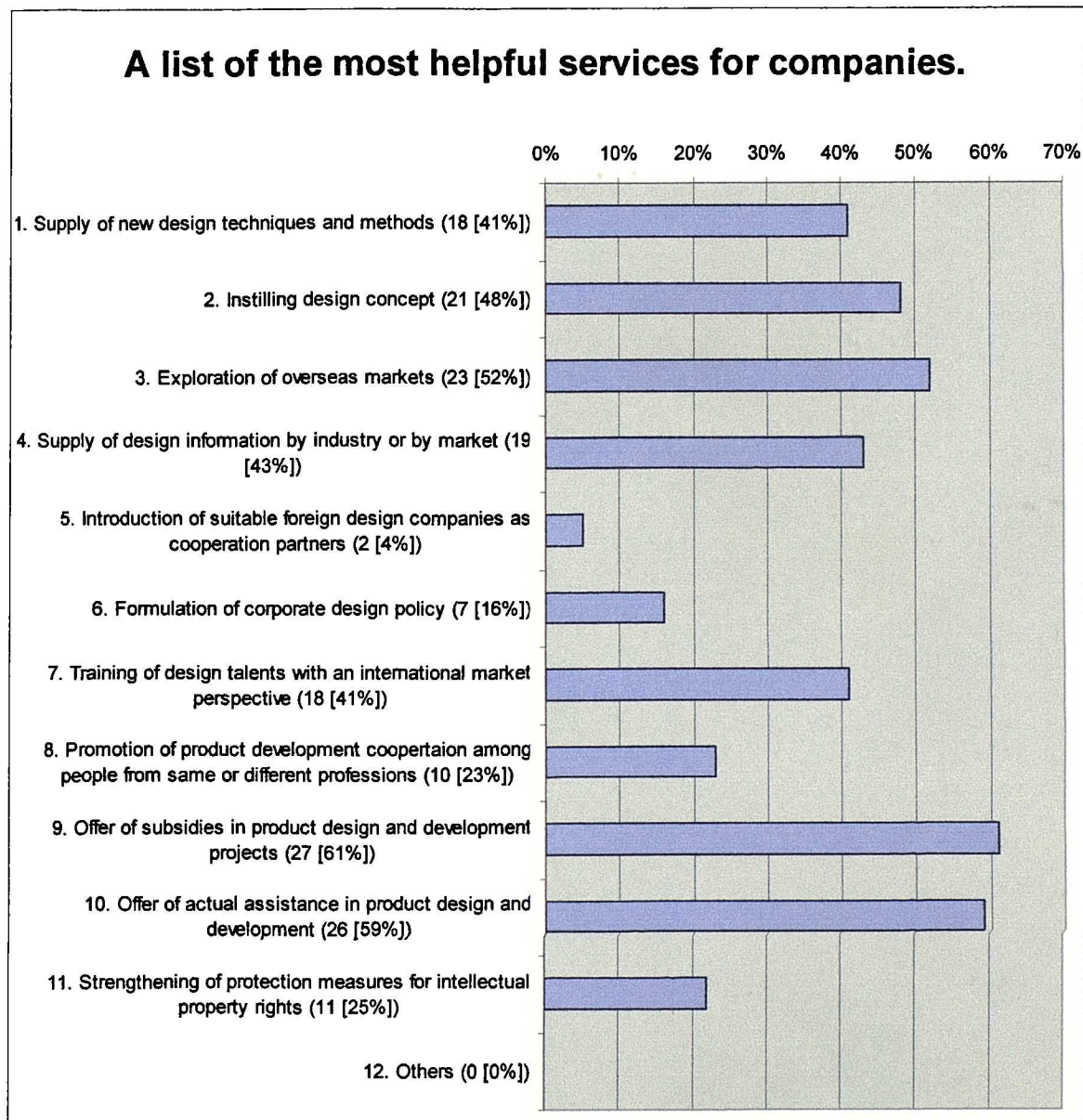


3. Has your organisation used the services of any foreign design companies for the past three years?



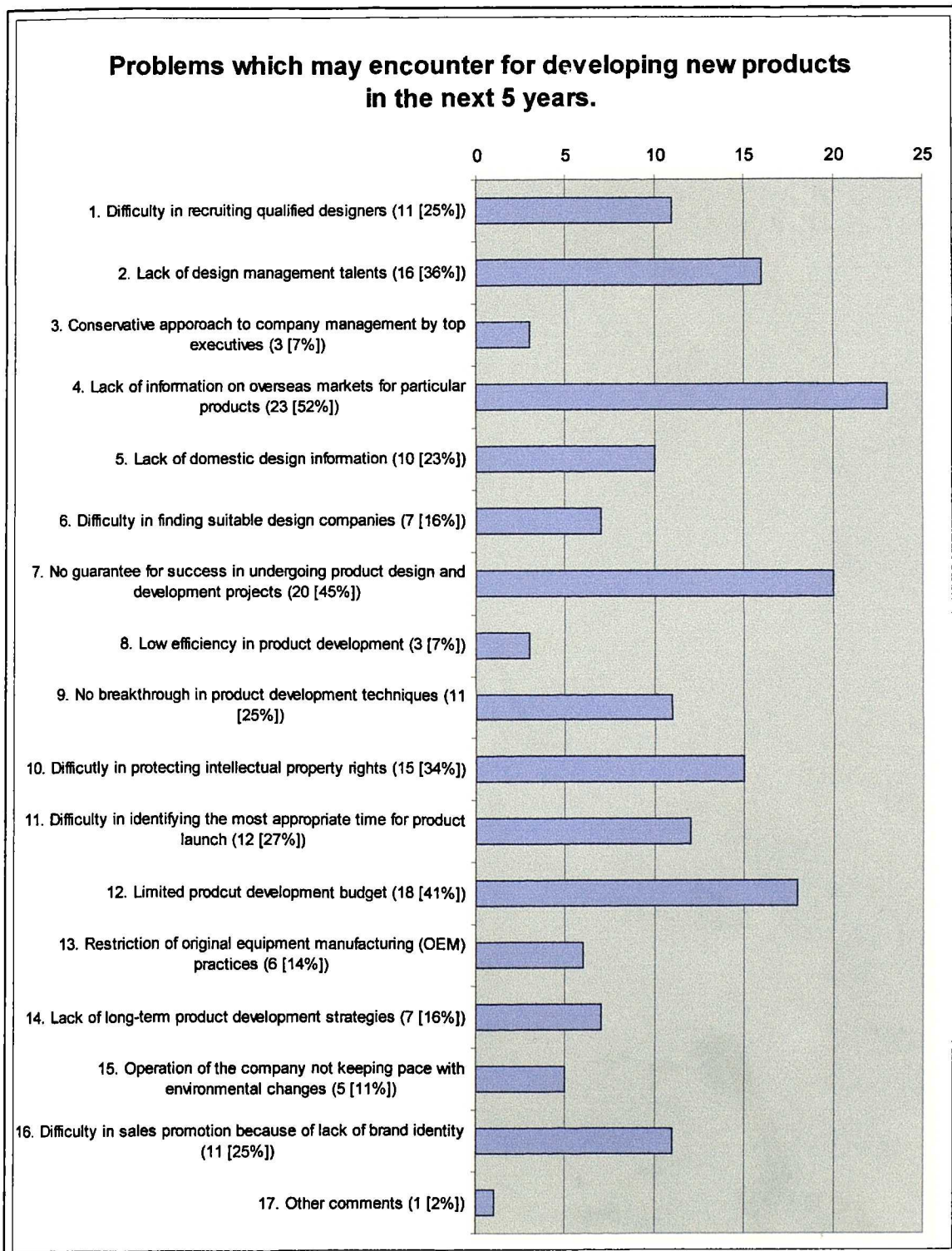
Remark: The foreign companies include: Design SA (Switzerland), FM Design (UK), KOZO SATO Design (Japan), Tangerine, Visio, Frog Design, AS&A, Glymukerr (Germany), and MAC (Italy).

4. Of the following services, which is (are) most helpful for your company for the next five years? (Please choose no more than 4 items.)



5. Please check the following problems, which your company might face
when developing new products in the next five years ?

(Please choose no more than 4 items.)



6. Should the Plan include projects to educate the general public, in addition to domestic manufacturers, about the concept of design?

Domestic Appliances industry:

● Yes (80%, 8 out of 10), because:

1. The exploration and improvement of design would need more participation to improve design education
2. The taste of consumers are getting better, this would improve the product design.
3. Only a sellable design can be a useful design, otherwise it loses the push for production.
4. The design process should become a habit, so it could influence everyone in the country. Thus everyone would demand design. Only by this, design would be the country's unique feature, eventually becoming a part of the country's competitive strength.

● No (20%, 2 out of 10), because:

Good design is a form of natural education, so there is no need in projects to do so. If the money were used in projects promoting practical International appearance education, this would result in the consumers design education.

Computer and Information technologies industry:

- Yes (88%, 7 out of 8), because:
 1. Opens up people's awareness of the importance of industrial design.
 2. Increases the knowledge and importance of design to consumers, so this would attract more talent and resources into this field.
 3. The market would exist only if there is an increase of appraisal and expansion of knowledge on design from consumers, and with industry introducing advanced designs. Otherwise, if everyone looks for cheap products, unique designs will cease to exist.
- 4. Use government's programmes to extend the country's design.
- No (12%, 1 out of 8), because:

Normal consumers do not require it.

Hand tools industry:

- Yes (75%, 6 out of 8), because:
 1. Only new design concepts can liven up the current market.
 2. Consumers are the push factor of economic growth.
 3. The capability of design and the level of consumers' acceptance of new design are correlated.
 4. Increase quality of living, prevent import goods from taking over the entire market

- No (12.5%, 1 out of 8).

No comment (12.5%, 1 out of 8).

Transportation industry:

- Yes (80%, 4 out of 5), because:

Only by increasing the consumers appreciation of "beauty", will products that had been designed with a lot of care be accepted by the market.

- No comment (20%, 1 out of 5).

Other industries:

- Yes (67%, 12 out of 18), because:

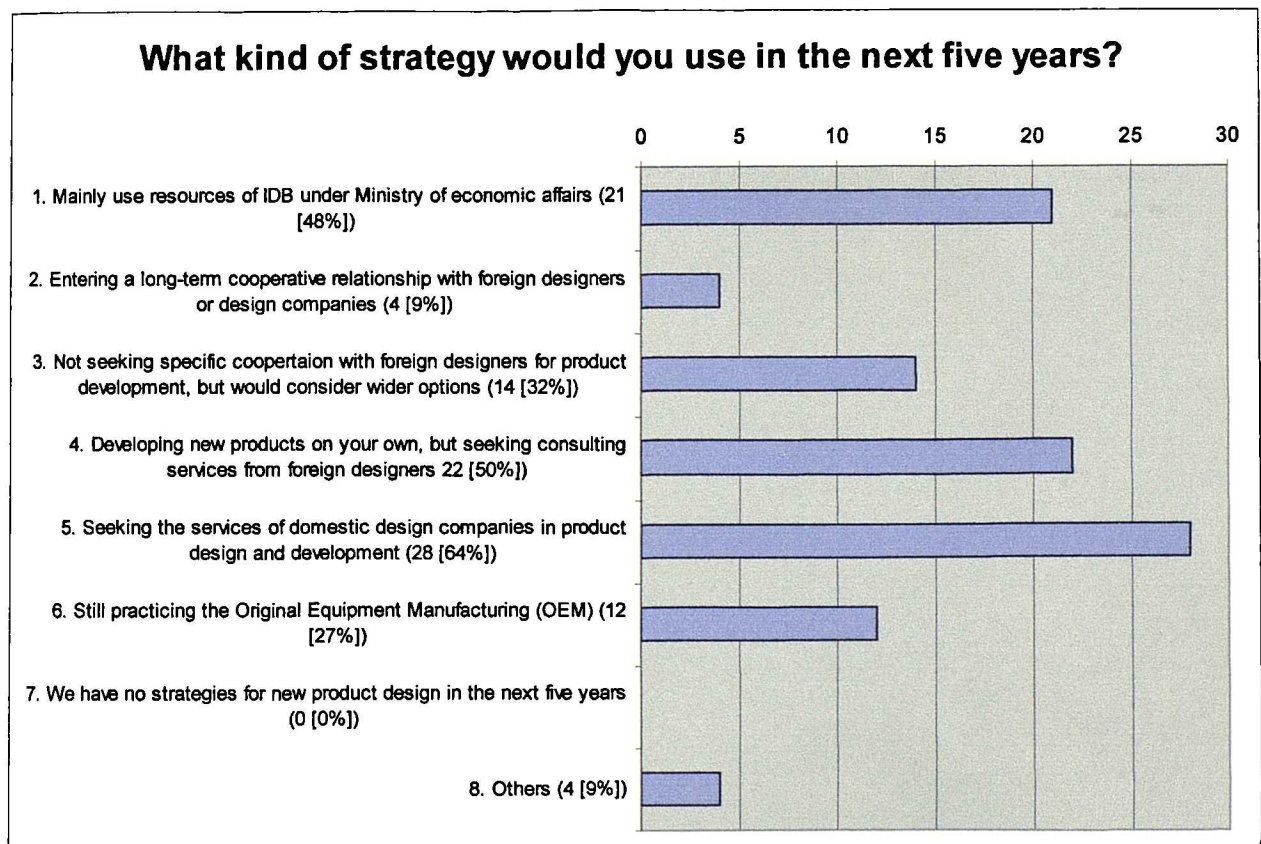
1. Increasing the status of local products, would first require the abolishment of the mentality that imported goods (especially ordinary stationery goods) are of a better quality than local brands.
2. Promote Intellectual property rights.

- No (5%, 1 out of 18), because:

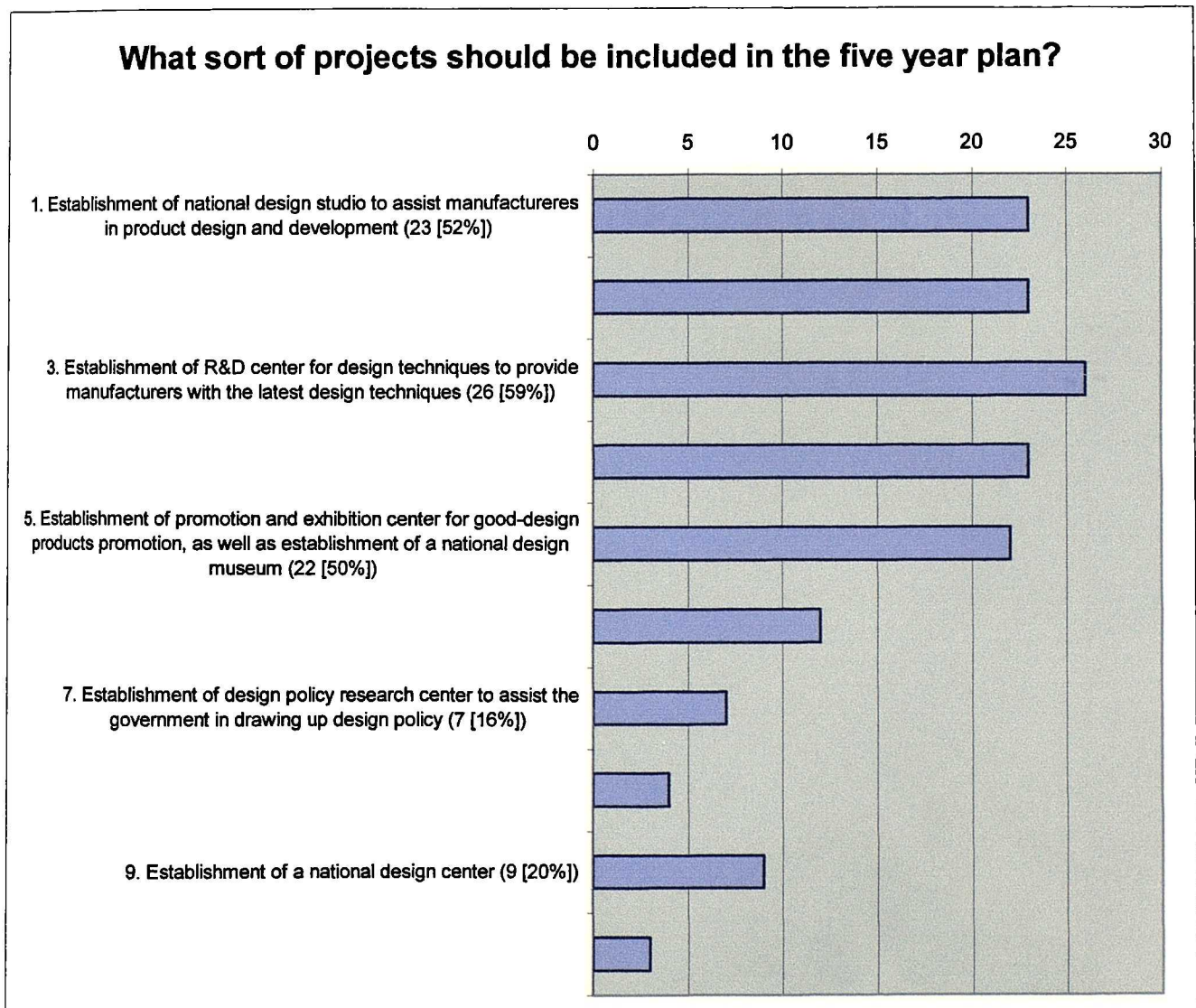
Government should be the first one to support our own design, government bodies should use furniture designed by local designers.

- No comment (28%, 5 out of 18).

7. Please indicate your company's strategy(ies) in the use of design resources in the next five years are: (Multiple Choice)

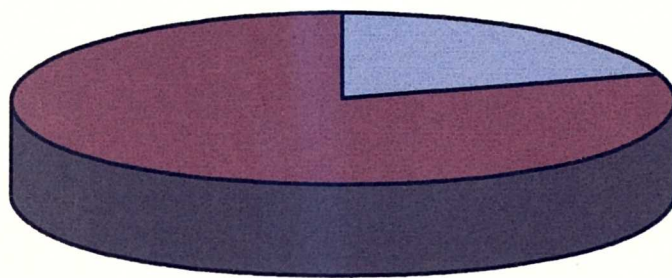


8. What project(s) do you think Taiwan's industrial design policy, formulated by the Industrial Development Bureau under the Ministry of Economic Affairs, should be included to best serve the industries? (Please choose no more than 4 items.)



9. What are the overseas markets your company will enter with products of good design in the next five years?

Companies which are going to enter overseas market in next 5 years

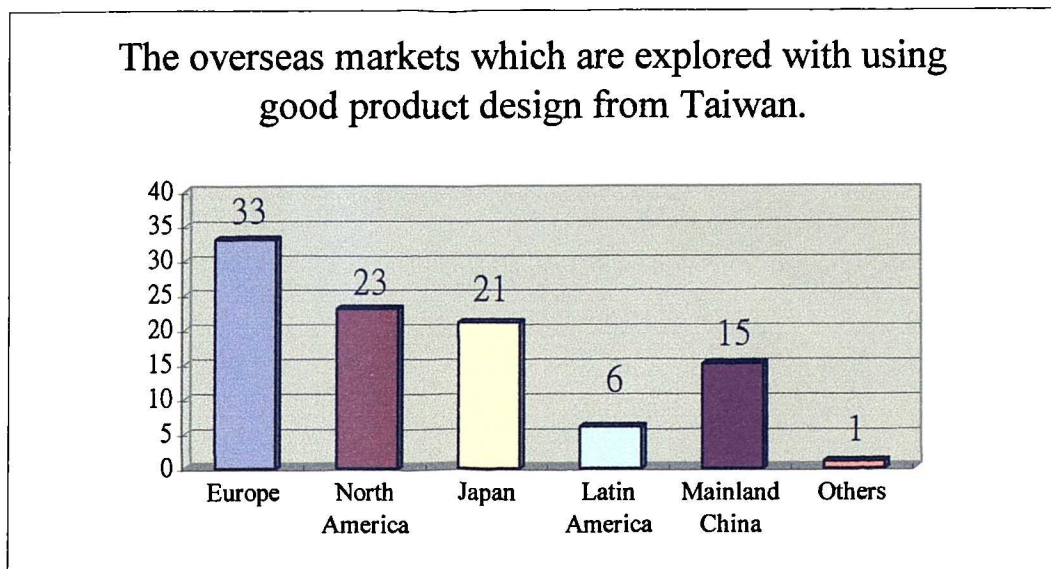


■ We have no such
plan (9 [20%])

■ We do have such
plan (35 [80%])

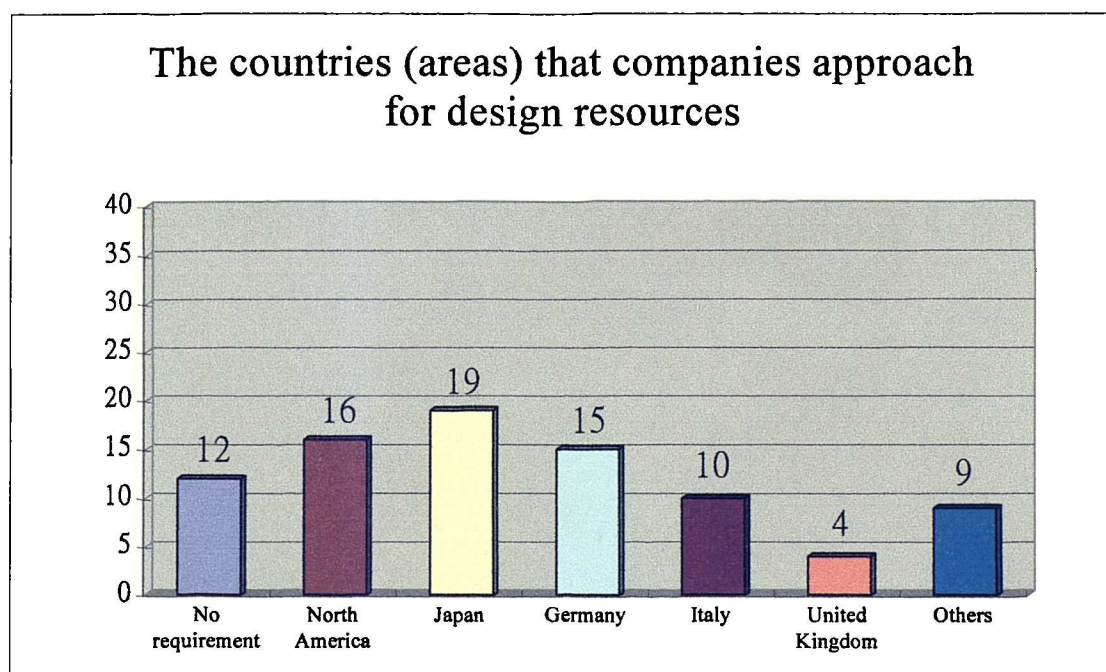
10. What of the following overseas markets your company will actively explore with using good product design ?

Note: "Others" include: South East Asia



11. What overseas countries (areas) will your company approach for design resources (manpower and information)? (multiple choice)

Note: "Others" include: the EU, Belgium, France, Holland (2), China (2), Taiwan (2).



12. Which direction shall the government follow in developing its design policy?

Please suggest

①Research on particular design subjects:

Domestic Appliances industry:

1. Education authorities should arrange a series of specific researches according to the industry's market demand. These useful researches could contribute to the involvement of all the authorities.

2. Design technologies for development and use of internet, to improve the development of products.
3. Organise particular subject discussion meetings, using holidays or evenings. It would be optimal not to be only in Taipei, also in Southern Taiwan.
4. Design shouldn't be specified to only some products, it should be expanded to design technologies or design methods.

Computer and information technology industry:

1. Using different characteristic of the various products to make appropriate design guidelines corresponding users habits or human engineering and providing these information to related industries.
2. Subsidise expenditures.

Transportation industry:

1. Publish design research papers regularly, to provide some guidelines for the industry.
2. Coordinate the development of the electricity-powered transportation devices.

Other types of industry:

1. Expand the particular design subjects onto more traditional industries instead of just concentrating on information technology industry.

2. Provide related information on survey data.
3. Public chairs (user habit, human engineering, design of the shape)

②Designers' Training:

Domestic Appliances industry:

1. Should reinforce integrated design engineers, to have perfect products that match from the internal details of the structure to the external look of the product.
2. Local designers should have international concepts so the products that they design would be more acceptable in the world.
3. Designers should have some knowledge of the market, so the design would be more merchandisable.
4. Each county should establish centres for the education of design talents, resulting in the increase of the design level of the whole country.

Computer and information technology industry:

Divide the training into different levels (beginners, intermediate, expert, and research), at the same time making the training a short term one.

Transportation industry:

1. According to the type of industry, organise a series of training sessions annually, could also join forces with local professional companies which would satisfy the areas' requirements. (Most of the good classes are

concentrated in the northern part, more organisation needed for the southern companies).

2. Provide scholarship for the senior designers of enterprises to study abroad overseas for medium to long term.
3. Product development needs a lot of time, and there is also lack of people that are capable computer users such as 3D designers, industrial engineers. There would be help needed for these types of problems.

Other types of industry:

Design management.

③Assistance on Product Design and Development:

Domestic Appliances industry:

1. Manufacturers hope to have the capability themselves, but because of the lack of funds, it is not so easy. Some subsidies would be appreciated for the small and medium industry for their own product development.
2. Exchanging ideas in the design experiences of same industry or different industries, and also having famous overseas design companies explaining different industries the correct design directions.

Computer and information technology industry:

Provide the industry with a list of qualified personal design studios or design companies.

Hand tools industry:

1. Provide assistance into market research according to companies' design case, to avoid wastage. And according to the products development, provide plausible projects and advice.
2. Coordinate with industrial design students to organise a design competition ranging from different industries to different products. The works shown can be recommended to the industry to promote good design to be more commercialised.

Other types of industry:

1. Help companies going abroad to participate exhibitions.
2. Provide information of popular products that are overseas.
3. Provide industrial information and channel of trade of the required location and give professional advice.
4. Household furniture design does not only concentrate on the change in forms or in the material. It is also concerned with the functions, the technology of surface color finishing and the metal accessories of the furniture. The design of different metal accessories combined with

different material of furniture has always been one of the weak points of our people, there is improvement required in this point.

④Design Information Collection and Analysis:

Domestic Appliances industry:

1. Use the same method as the industry news information center in Tokyo Japan, collect information relating to different countries from the overseas bureau, to enable research and development of the whole industry.
2. CETRA's main and most important duty is to provide vast amounts of market information of both local and overseas markets. This would then provide the manufacturers with some guidelines when they evaluate different markets. Now Taiwan is in the process of globalisation, the evaluation of the market and decision making requires a large amount of information to speed up the speed and quality of decision making. The Internet would be a good medium to provide this kind of information.

Computer and information technology industry:

1. Analyse the fashionable design trends and also collect popular products' catalogues providing them as a reference source for the manufacturers.
2. Combine research on particular design subjects into a professional magazine, and divide the design information into different subjects, systematically printing it out and distributing it to different manufacturers regularly.

3. Hand tools industry:

1. Manufacturers have to go abroad annually several times to participate different exhibitions to collect different product information that is quite tiresome. If CETRA could help out with information collection from the different exhibitions, this would help the manufacturers to design in pace with the global trends.
2. Establish a professional research unit to analyse different data.

⑤ Formulation of Design Policy:

Domestic Appliances industry:

1. Fortify the push of the project that Industry Development bureau of MOEA has introduced of the improvement of product design by increasing funds to help manufacturers to develop and design new products.
2. Establish a design network centre, so it would integrate the new product developments' process all together.
3. Should speed up the process for the application for intellectual property right.

Transportation industry:

1. Increase the image of the bicycle in the market.
2. Matching consumers need, improve shop front management and try to change in chain store style.

©Establishment of a National Design Center

Domestic Appliances industry:

Establish national design center bureau, push and educate national designers to increase national competitiveness.

Computer and information technology industry:

Establish design museum.

Transportation industry:

1. To increase the country's whole competitiveness is the most basic goal, which means having a strong design capability and innovative ability. A national design center should have been established 10 years ago to collect all the design talents in the country.
2. Invite experienced talented designers to help increase industry's whole design capability to achieve the goal " Made in Taiwan = Quality Design Technology".

Hand tools industry:

Establish a national design center, where manufacturers and the design centre coordinate the design and development process. Publish their progress regularly to local manufacturers, also providing information for other manufacturers, making the national design center as the leader in design trends.

⑦ Suggestions on the Five-year plan to upgrade industrial design:

Domestic Appliances industry:

Could introduce to more small and medium industries hence increasing the percentage of the numbers of small and medium industry.

Computer and information technology industry:

Help manufacturers to publish their design and development to related news and to aid them in different important events.

Transportation industry:

1. Should aim at a wide range of districts and choose manufacturers that have potential.
2. Coordinate with government's policy to establish branches of the "Design Information Library" in both Tainan and Taichung (South and Centre Taiwan)

3. Collect international information and collate into a CDROM providing manufacturers with immediate help.
4. Organise an overseas design centre tour, there are a lot of manufacturers that don't know how to use these design resources. Once a manufacturer has entered the plan, then they will have priority to participate in this overseas tour.
5. Draws up a series of computer aided design and production plans, and also provide related information and programme designs.

Hand tools industry:

It would be much appreciated to have the subsidised percentage of the plan increasing up to 50% as an encouragement to manufacturers for their development.

Other types of industry:

1. The stationary industry is a multi-manufacturing industry and requiring a high labour force, the profit is also one of the lowest, This then means that most of the local manufacturers do not bother to develop and design themselves, but copy other products, serve as an agent for foreign products or accept foreign brands, and do business with OEM system.
If a company decides to join force with Industrial development bureau MOEA and then to design and develop within the company for the local

market, in most cases this would cause a stock piling of Japanese products in stores which would be a pressure.

Also there are Taiwanese manufacturers who produce counterfeit products in China where cheap labour is an advantage, and as a result occupy a part of the export market.

2. Increase the value of MIT (made in Taiwan).

13. List of manufacturers that assisted in the questionnaire.

1. Computer Industry

- 1-1 Lectron co., Ltd
- 1-2 GVC corporation
- 1-3 Elanvital corporation
- 1-4 Mustek System Inc.
- 1-5 Mr. Info co., Ltd
- 1-6 Attention system development co., Ltd
- 1-7 Tamarack technologies Inc.

2. Home Appliances Industry

- 2-1 FuHua Vacuum Bottle co., Ltd
- 2-2 Tung Fu Electric co., Ltd
- 2-3 TECO Electric & Machinery co., Ltd
- 2-4 Wei Gi co.

2-5 Daycrown Ind co., Ltd

2-6 Hoyo Foundary

2-7 Fellow YC co., Ltd

2-8 Bliss Electronic co., Ltd

3. Hand Tools Industry

3-1 Apex MFG co., Ltd

3-2 Ching-cheng co., Ltd

3-3 Der Shiang co., Ltd (2)

3-4 Chao cheng co., Ltd

3-5 Geon Hung Enterprise co., Ltd

4. Transportation Industry

4-1 Karma Medical Products co., Ltd

4-2 Kang Yang Industry corp – KYMCO

4-3 Tiling Motor co., Ltd

4-4 Pro-Glory Enterprise co., Ltd

4-5 Merida Industry co., Ltd

5. Other Industry

5-1 Rabbit Ind. Corp.

5-2 Pentech Industry Inc

5-3 Pao Shen Enterprises

- 5-4 Hwangs co. Ltd
- 5-5 Yung Shing Furniture co., Ltd
- 5-6 Shiang Ye Ind co., Ltd
- 5-7 Chuan Tai Electronics
- 5-8 Everwipe golf co., Ltd
- 5-9 Ying Lian Plastics Industry co., Ltd
- 5-10 Kampo co., Ltd
- 5-11 Ming Jong
- 5-12 Cheng Yu technologies
- 5-13 Tai Cheng industry
- 5-14 Hony Glass Factory co., Ltd
- 5-15 Wen Ben Aluminum Extrusions co., Ltd
- 5-16 Bao Feng Chemical industry

Summary of main findings : manufacturing circles

- 1) Offer of subsidies and actual assistance in product design and development projects are most helpful for Taiwan's company for the next five years.
(Questionnaire 4)
- 2) When developing new products in the next five years. Taiwan's company might face the problem of " Lack of information on overseas markets for particular products." (Questionnaire 5)
- 3) Establishment of R & D centre for design technique to provide manufacturers with the latest design techniques. And, also, establishment of designers training centre to train designers and design managers should be included in the five years plan.(Questionnaire 8)

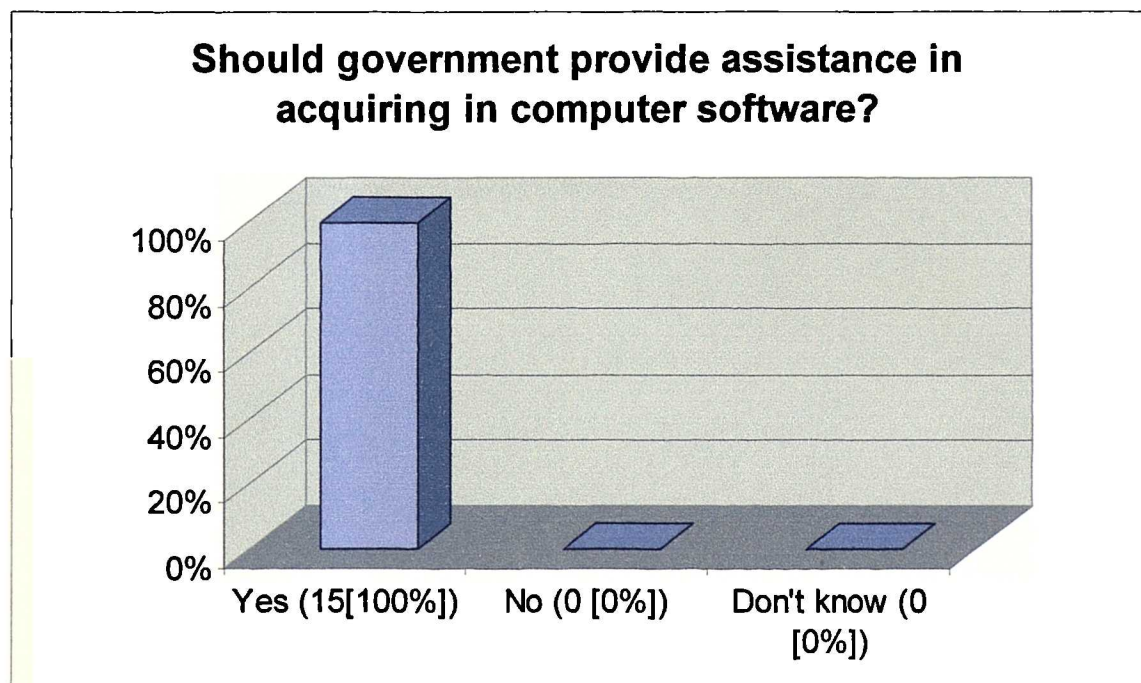
Analysis of findings 2

4.4.2

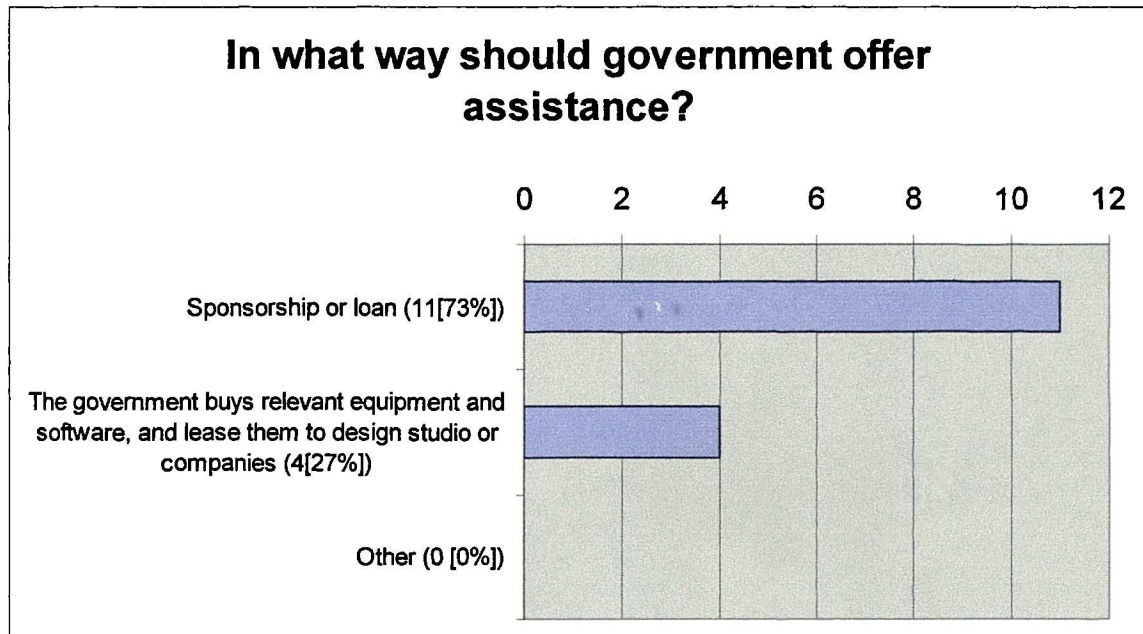
Design Company

Note: Percentages are calculated on the basis of 15 questionnaires for this part of the survey.

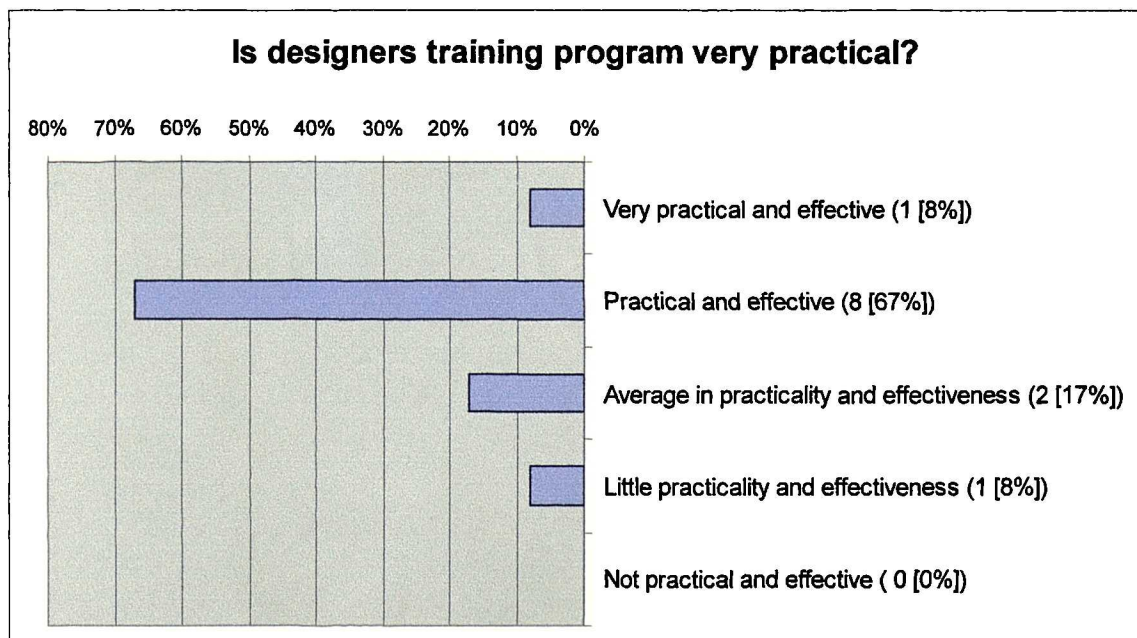
1. Computer software is necessary in modern design, but it is very expensive.
Do you think that the government should offer assistance in this respect?



2. Computer software is necessary in contemporary design. But it is very expensive. How do you think the government should offer assistance?

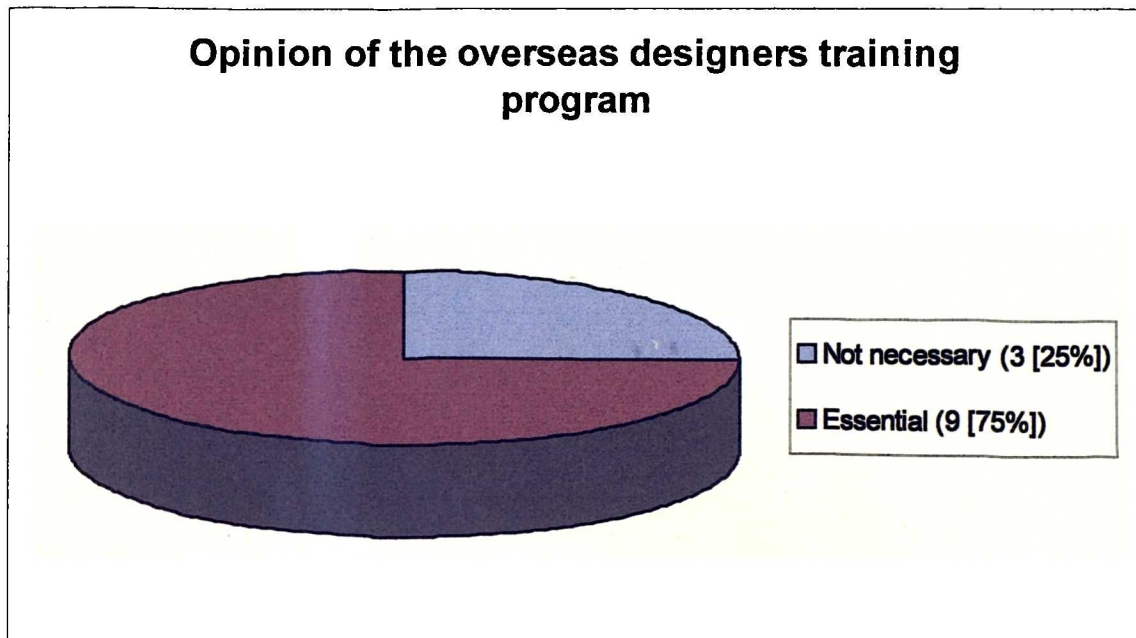


3. Do you consider the designers' training programme to be very practical?



Note: Analysis based on 12 questionnaires filled in by local industries.

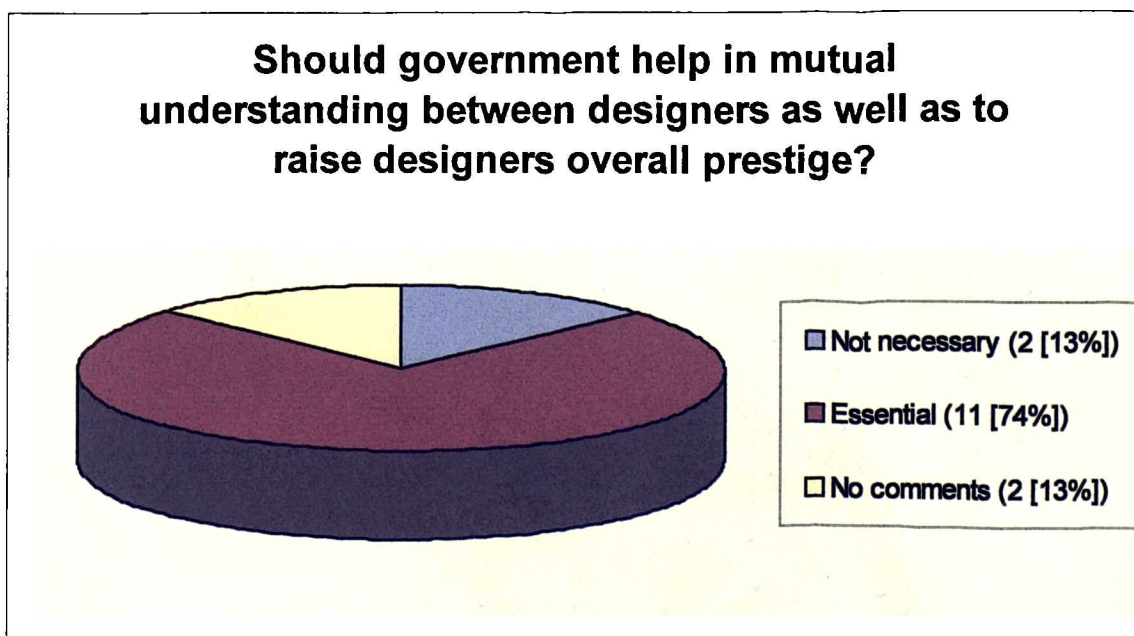
4. Do you think that the overseas designers training programme is very



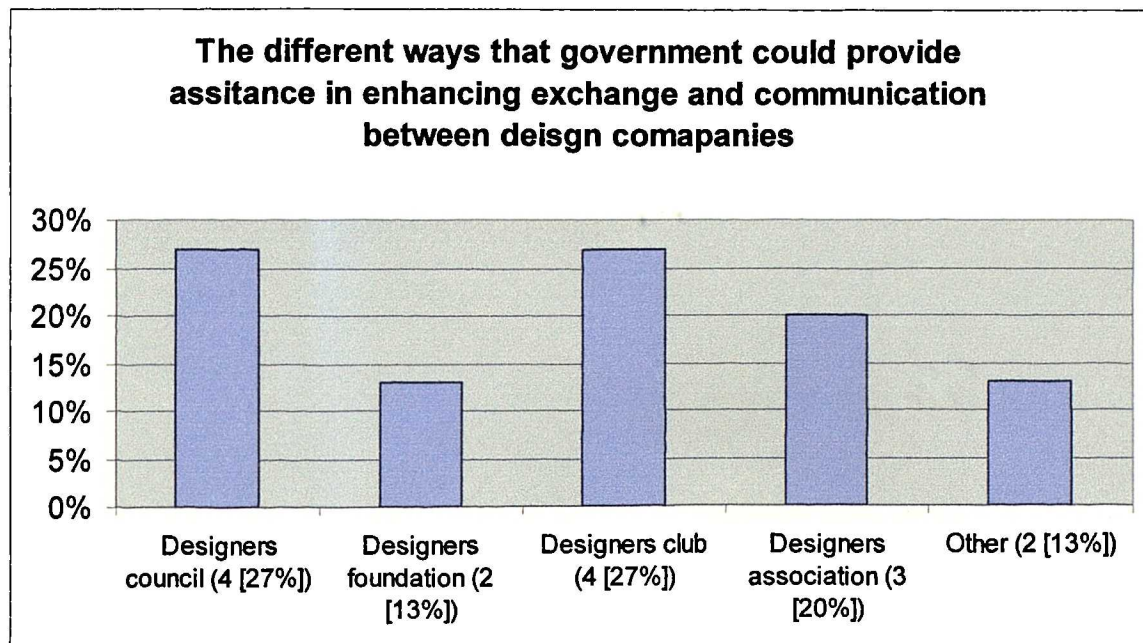
necessary?

Note: Analysis based on 12 questionnaires filled in by local industries.

5. Do you think that the government should act as a bridge of communication among designers in order to improve their mutual understanding, as well as improve designers overall prestige?

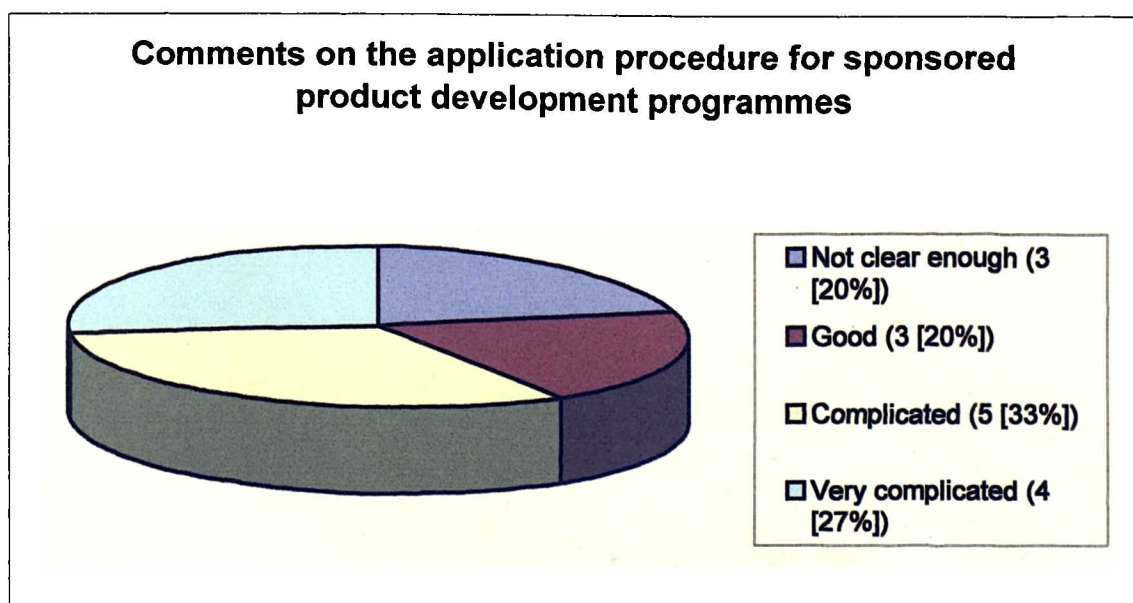


6. How should the government provide assistance in enhancing exchange and communication between design companies?

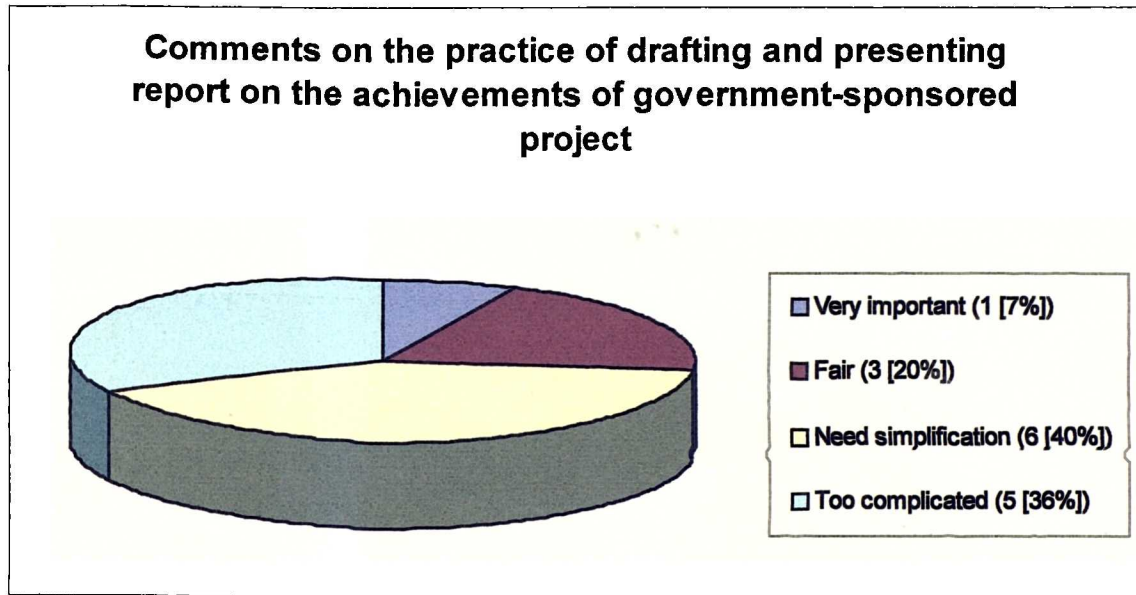


7. What is your comment on the application procedure for government sponsored product development programmes? “

“I consider the procedures....”



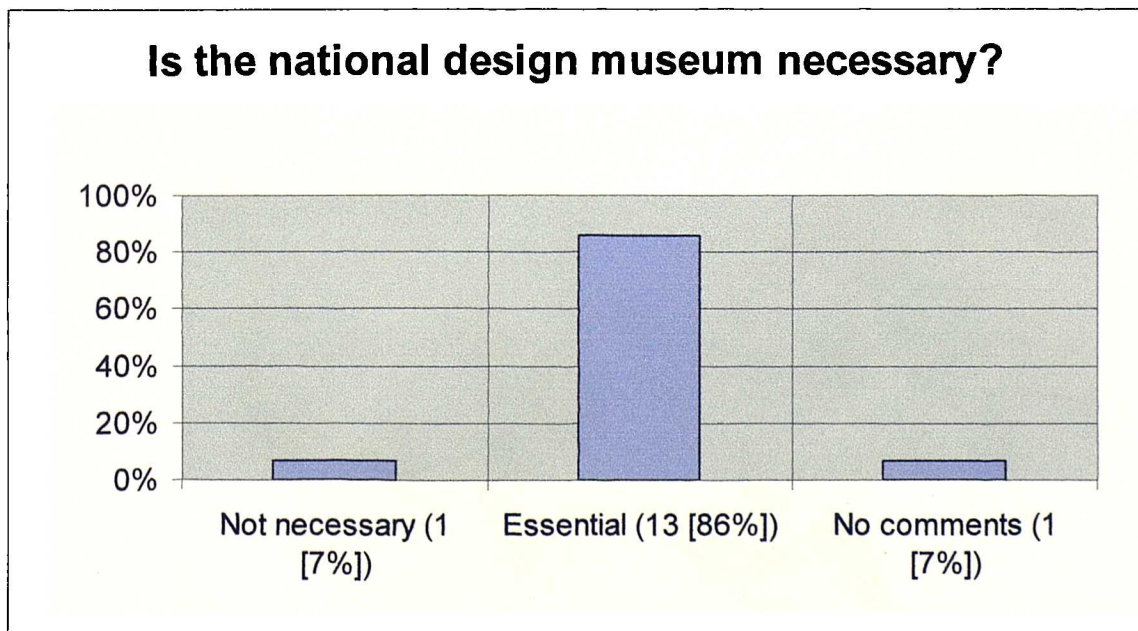
8. What is your comment on the practice of drawing up presentation reports describing the achievements of government-sponsored project after its completion?



"I consider this practice to be..."

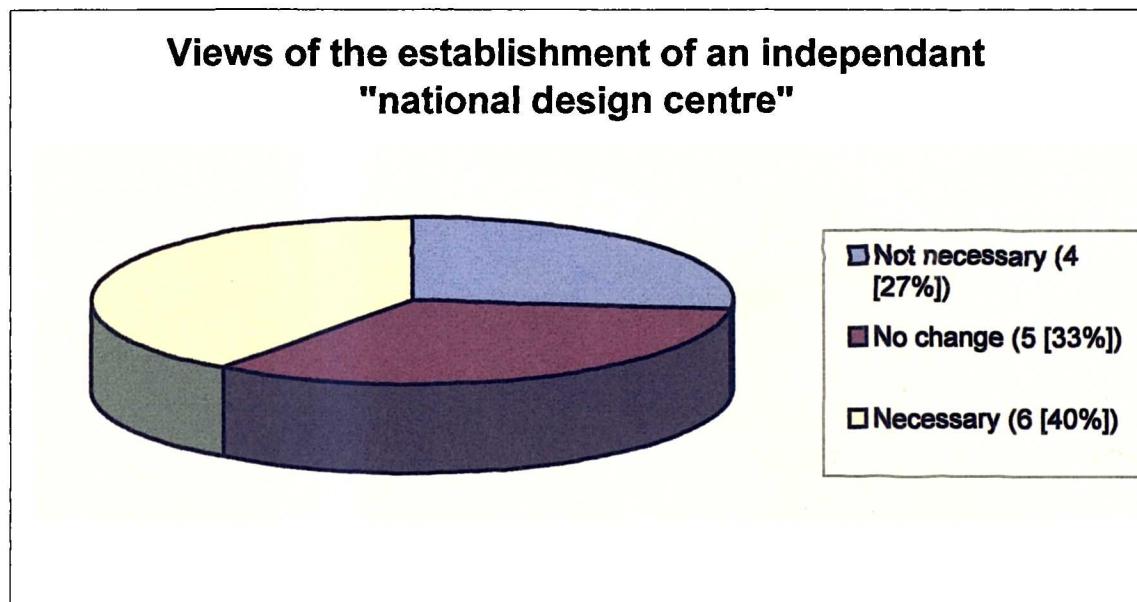
9. What is your opinion on the foundation of a national design museum?

"I consider a national design museum to be...."



10. At present the government (IDB) has entrusted China External Trade Development Council (CETRA) to implement the "Five-year Plan to Upgrade Industrial Design". However CETRA is mainly a trade promotion organisation.

Do you think the government should establish an independent "national design centre? "



11. Based on your demands, In what way(s) do you suggest the government should assist your company in the following topics:

① Study on specific design topics:

1. Human factors design (Ergonomics)
2. According to our country's future and the demands of our society, come up with design demonstration projects. Use public system or special user groups to demonstrate a goal, to provide complete design concept in the advancement of future technology.
3. Should research the current environment of the local Taiwanese industry's difficulties, then help them to grow. Hence they would be

able to upgrade the competitiveness and improve quality. This would be the first thing to look at, then gradually research on other topics.

4. Analyse the different professional design procedures according to different product types, Research and analyse the product design procedures' and design concepts.

② Designer's training:

1. Training of the use of 3D design tools, should lower the cost for 3D software training.
2. Designer's training should be mainly "Environmental education", it should be done in two ways: one is to practice on a short term basis in an overseas professional design institute or work as a temporary designer in an overseas design company. Another method would be join forces with local and overseas designers to exchange ideas.
3. Sponsor training programmes which consist of design techniques to be obtained from more industrialised countries.

③ Assistance in product development and design:

1. Market research and product planning.
2. Provide funds and schemes for new product development plans to encourage investment in R&D. The currently passive attitude towards design work should gradually become initiative.

3. Provide reward and assistance, such as special loans, for patent applications and patented products.
4. Provide small and medium sized industries with subsidies or low interest loans for follow-up design researches in order to increase the respect and trust of the industry towards the design field while at the same time providing assistance to the industry's design development.

④ Collection and analysis of design information:

1. There is need to collect local designers and other design experts' research papers and locally designed products to form a design information database.
2. Cooperation with overseas research institutes and market research companies, to obtain up-to-date market trends and information.
3. Encourage design companies to visit international exhibitions.
4. Sponsor a programme providing opportunities for Taiwanese designers to upgrade their capabilities in different design tasks. The overseas Taipei Design Centres in Europe and Japan shall play an important role in training Taiwanese designers.

⑤ Design policy

1. International market direction and global design concept.
2. Protection of the living environment
3. Increase the quality of life.

4. The pursuit and design of new lifestyle
5. Approval of a national value.

@ Establishment of a National Design Centre (NDC):

1. Should first establish a national design centre to organise the country's design business activities. Then combine G-MARK and "Product Excellence Award" to increase excellent designs on a national level.
2. Sponsor NDC's to manage matters in the field of design on a general and national level.
3. Establish market research centres, and design museums.

② Suggestions on the Five-year Plan to Upgrade Industrial Design

1. Assist design companies to become more professional.
2. Increase the limit of subsidies.
3. The new Five-year plan should include public equipment design, so people could experience the function of new designs.
4. The application for the five-year plan should be analysed first, to ensure its feasibility
5. Designer training should have more than two tutors.
6. CAD/CAM equipment should be one of the most important factors in the new five year plan. Participating design companies should be provided with long term low interest loans to improve design quality and speed.

12. Design companies assisting in this survey:

1. Consar Design & Engineering Associates
2. Taipei design Centre Milano srl (2 surveys)
3. Neway Product Design & Development co., Ltd
4. New Design Service Centre
5. JR International Industrial Design co., Ltd
6. Chance innovations
7. Jia-Tee Design Co., Ltd
8. Art Systematic Furniture co., Ltd
9. Han Ling Culture Co., Ltd
10. Hu Strategic & Development Network
11. Trans Design co., Ltd
12. Centre Design co., Ltd
13. Aei Wei Ta Design Co., Ltd
14. Taipei Design Centre Dusseldorf GmbH

Summary of main findings : Design company

- 1) Computer software is necessary in contemporary design, the Government should offer sponsorship or loan assistance. (Questionnaire 2)
- 2) The overseas designers training programme is very necessary.
(Questionnaire 4)
- 3) The national design museum is required.(Questionnaire 9)

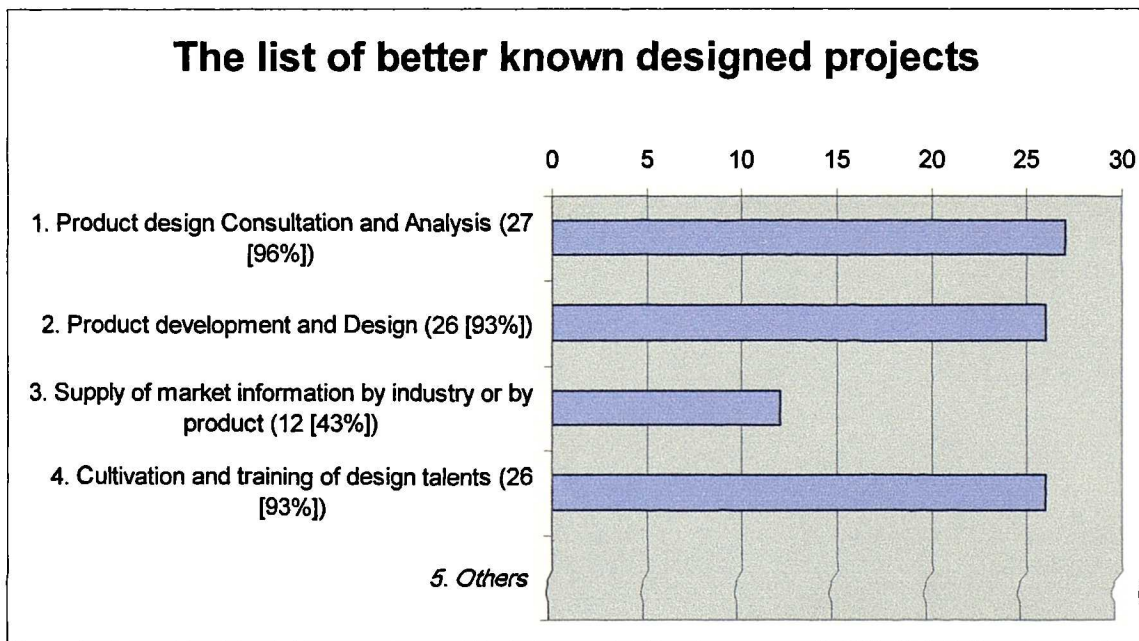
Analysis of findings 3

4.4.3

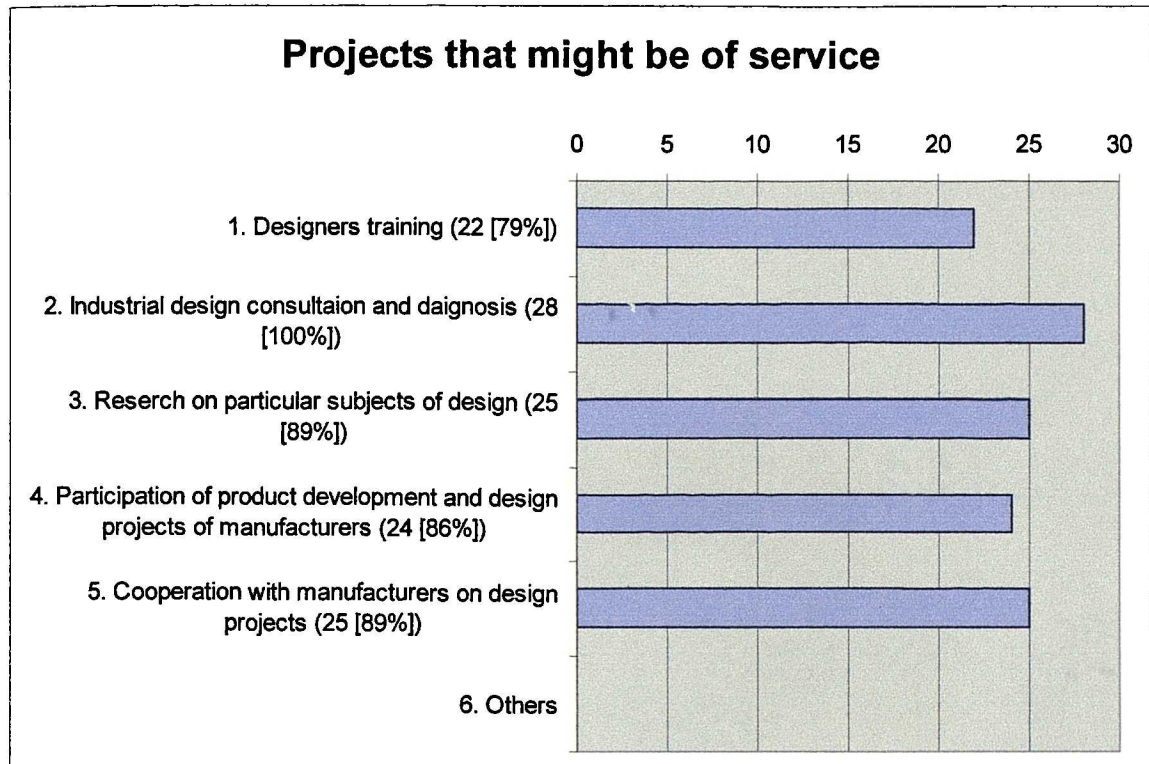
Scholars at Design Education Institutes (Experts in Design Consultation and diagnosis)

Note: The calculations in this analysis are based on 28 returned questionnaires.

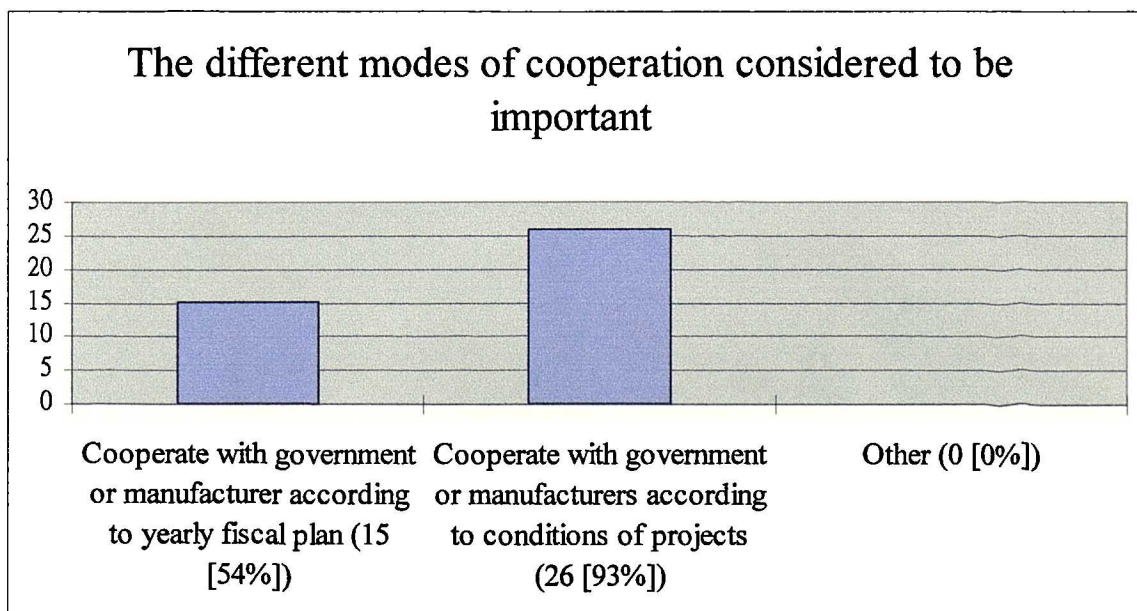
1. The following design projects are included in "The Five-Year Plan for the Overall Upgrading of Product Design (1989-1994, 1994-1999)," which the government (the Industrial Development Bureau under the Ministry of Economic Affairs) has entrusted CETRA to execute.
Please check the one(s) that you have knowledge of. (Multiple Choice)



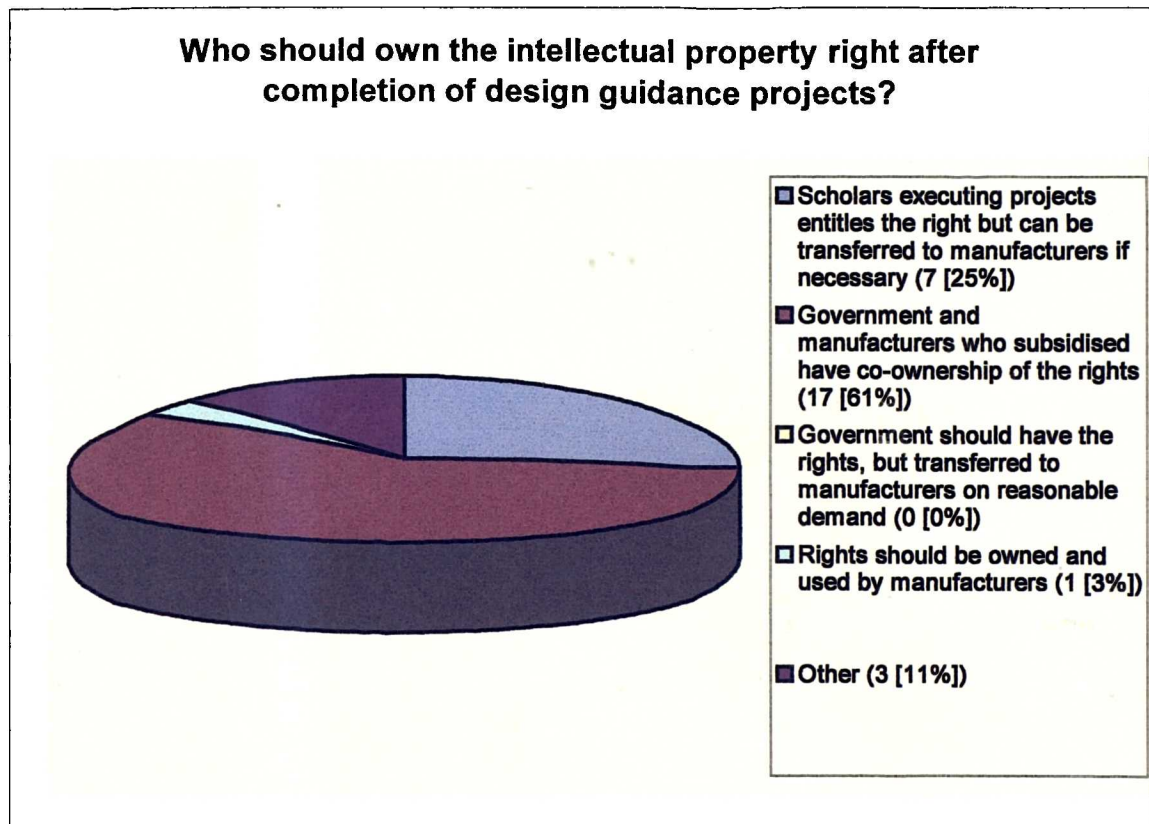
2. Of the many following design projects implemented by the government (IDB), which one(s) do you think you can be of service? (Multiple choice)



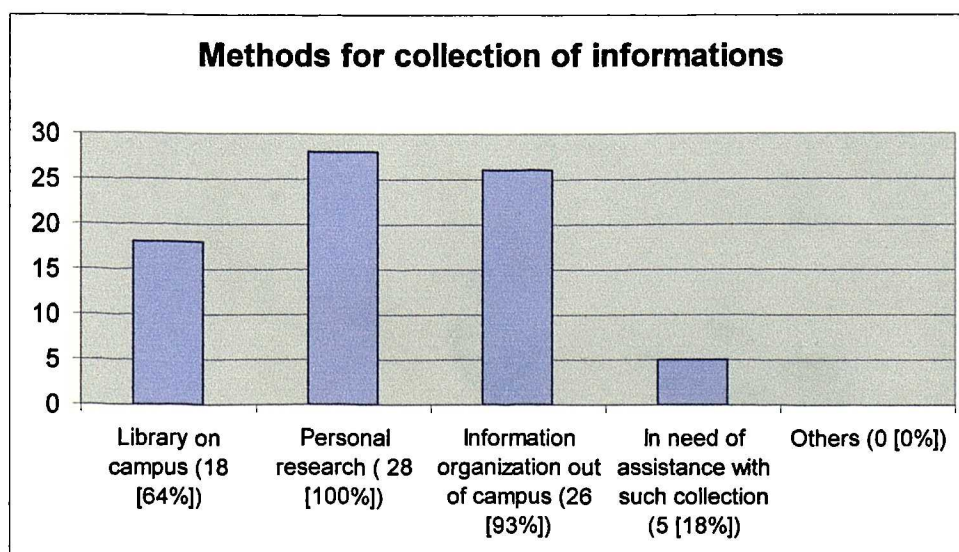
3. What is your comment on the following methods of cooperation between manufacturers and design educational institutes? (Multiple choice)



4. What is your comment on the ownership of intellectual property rights after completion of design guidance projects? (Please choose one item only)

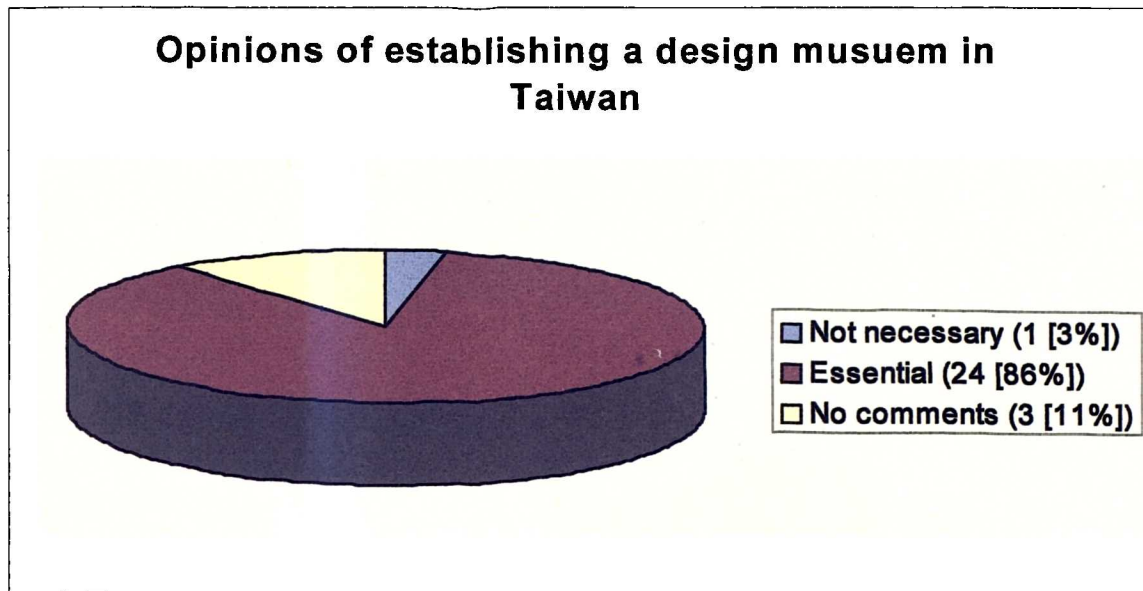


5. Design and marketing information are very important during the process of new product development. How do you collect this information? I collect it from... (Multiple choice)

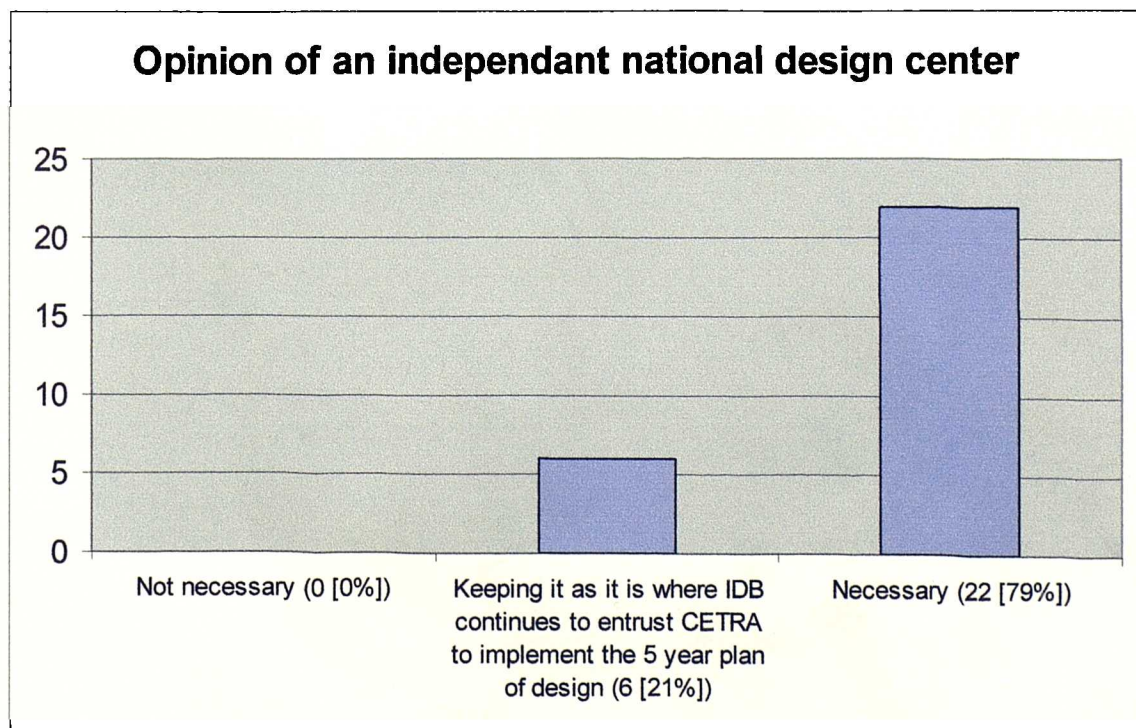


6. Do you think Taiwan should establish a design museum?

"The Design Museum is..."



7. At present the government (IDB) has entrusted China External Trade Development Council (CETRA) to implement the Five-year Plan to Upgrade Industrial Design. But CETRA is mainly a trade promotion organisation. Do you think the government should establish an independent "national design centre?"



8. Based on your demands, In what way(s) do you suggest the government should assist your company in the following topics:

@Study on specific design topics:

- *Design concepts:*

1. Should use practicality to substitute theory. Should separate national science and technology committees and ministry of education's characteristics and emphasise topics related to manufacturers, to avoid clashes with their topics.
2. Choose specific trades, according to industry or district, to establish joint projects between industry and design departments. Combine specific design topics, R&D and education into one body.
3. Should co-ordinate research topics with local industries and execute an appropriate educational unit to fulfil the design policy of these joint forces between manufacture and education units.
4. Team up with different fields to expand the design concepts.
5. The government should not interfere with matters that the local companies (manufacturers and design companies) can manage to do well already. At present local manufacturers need assistance in entering the overseas marketplace, design companies need more globalisation to satisfy the requirements of export-oriented industries.

- *Design topics:*

1. Focus onto different local industry and society needs to research topics.

Such as design cultures, living habits research, human factor engineering, materials.. etc researches.

2. Computerised and autonomised design, design management, design policies, design evaluations, usability management, product colour planning, product management, national design competitiveness.
3. Research on elder population's products
4. Emphasise culture products' design to co-operate with national value and industry's development.

@Designer's training:

- *Trainee's consideration*
 1. Consideration of junior high school, high school, professional high school pupils in order to advance the understanding of design.
 2. Provide opportunities for teaching staff to get in contact with the industry, possibly not charging any money to encourage staff to participate.
 3. Establish different design techniques and design planning talents' education according to different interests and abilities.
 4. Current industry technology designers need improvement in market research and structure design ability, and development engineers who do not have an industrial technology background would need courses for industrial technology related topics. Course credits would be appreciated.

- *Training techniques*

1. According to different Industrial locations
2. Conferences of research and study of design (according to industry or product type), ability training top class design concept classes.
3. Train people who have more experience and could co-ordinate with school's industrial design researches' class to proceed with the research.
Could also give course credits.

- *Others*

1. Most training courses are held only in Taipei, there is a need for classes in the southern part of Taiwan to facilitate designers that are willing to study.
The government could also hold winter or summer courses for design educators. The classes shall be more varied.
2. The people in charge of the courses shall have more power over the structure of classes, number of students enrolling in these classes and time schedule of classes to facilitate enrolment.
3. As for product development, the government shall provide subsidy but the manufacturer should also participate. The percentage of participation of the manufacturer shall be lowered to 0% or 50%, according to the content of the course, some shall be set at 3 different levels, A:0%, B:30%, C:50%.

③ Assistance in product development and design

1. Assist design consulting companies or education units to materialise cooperation with manufacturers to develop new products.
2. Government should have sufficient information (including documents or products) to supply the market and potential users with information. Organise and analyse collected information with specialists and provide it to manufacturers.
3. Increase the guidance via mass media.

④ Collection and analysis of design information

1. Establish design records database service network on the internet, and organise the information in different categories which makes it easier for manufacturers the research on design information.
2. Open the whole design information library to the public.
3. Should expand the translation of the non-English design papers accordingly, at the same time translate the design information of the advanced countries, put them in columns to introduce new ideas and concepts.
4. Study and analyse the global market information and transform it into material which could be used by industry and designers.

⑤ Formulation of design policy

1. Provide recognition to industries that investment in design development,

and also introduce the concept of 'product design' into the regional culture.

2. Draw up a long-term national design plan, so the regional design fields have a guideline.
3. Emphasise the training of computer aided design, encourage design companies to be more professional, and to choose a specific industrial sector to concentrate on. Cultivate important design companies and star designers.
4. Choose *important universities from the northern, central, southern part of* Taiwan for staff from design institutes to engage in further research.
5. This should be an all-round policy, to publicise not only to the industry, but also to educate the general public on the issue of design - one of the most important tasks.

⑥ Foundation of a national design center

- *The significance*

1. A design management unit specially established and taken in charge by the government
2. Professional people in specific organisations to promote the issue of design, in order to improve quality of living on both the material and spiritual level.
3. Should be an independent administration department and shall be a

long-term project in order to achieve stability. This center should also have a design information section and display section for new designs

4. One of the main features would be to disseminate Taiwanese culture (have design hall's feature), should promote Taiwanese design export leaflets and exchange of ideas (have sufficient ability in mass media), and provide the industry a door to extend their view of the world (have information research centre)
5. Organise good product development and design conferences, regular discussion seminars and a long-term design exhibition for good design products.

- *The location*

1. Aid schools to establish' design centres, under the model of the national design centres.
2. Establish design museums.
3. The national design centre shall have branch offices all over the country to facilitate consultation.

⑦ Suggestion on the Five-year Plan to Upgrade Industrial Design

1. The beginning, the five-year plan concentrated in completeness and universality, and now have achieved most of the goals. With this foundation, we shall now use "specific location" or "specific talent" as an emphasis to increase globalisation view.

2. More publicity needed (should let more of the public understand the concept of design) and examination of the progress should be improved, instead of just collecting statistics and projecting a false image with it.
3. Improve promotion and the resource locations in the southern part of Taiwan.
4. This five-year plan has promoted design concept positively to the industry. Further expansion would be appreciated.
5. Should expand and combine the council for cultural affairs executive yuan and board of foreign trade of MOEA's resources, to promote design export and foreign relations.

9. List of design education institutes that have participated in this research:

1. National Yunlin university of science and technology (4 Surveys)
2. National Taipei university of science and technology (3 Surveys)
3. National cheng-kung university (1)
4. Chao Yang university of technology (1)
5. Tatung institute of technology (1)
6. Tung-Hai universty (3 Surveys)
7. Da-Yeh university (2 Surveys)
8. Ming-Chung university (3 Surveys)
9. Shih-chien university (1)
10. Hua-Fan university (2)

11. Ming-chi institute of technology (4 Surveys)
12. Oriental institute of technology (2 Surveys)
13. Fortune Junior college of technology and commerce (1)

Summary of main findings : Design Education Institutes

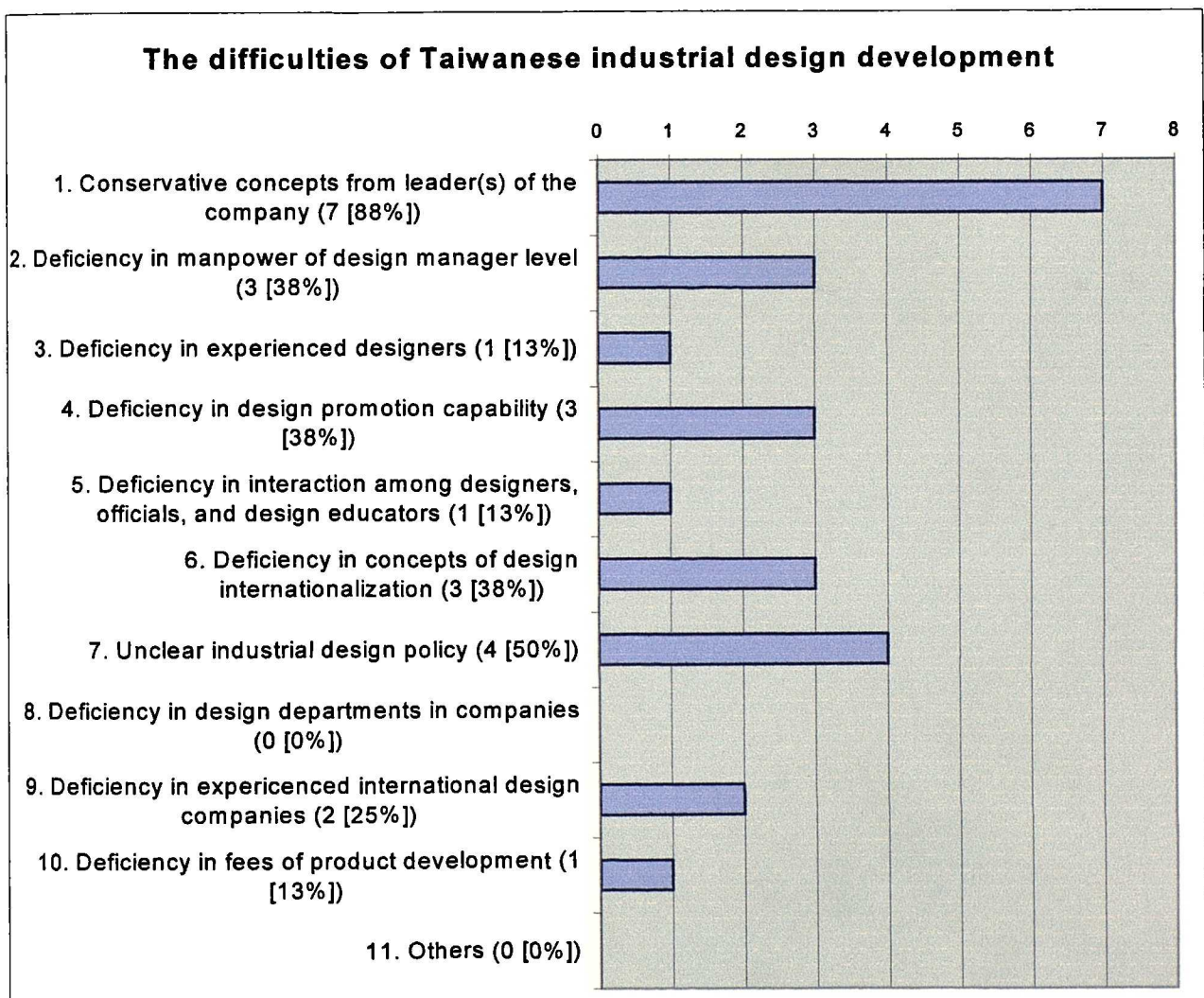
- 1)Industrial design consultation and diagnosis ; research on particular subjects of design can be valuable.(Questionnaire 2)
- 2)Design educational institute would benefit from cooperation with Government or manufacturers according to conditions of projects. (Questionnaire 3)
- 3)Taiwan should establish a national design museum and an independent "National design centre" (Questionnaire 6 & 7)

Questionnaire

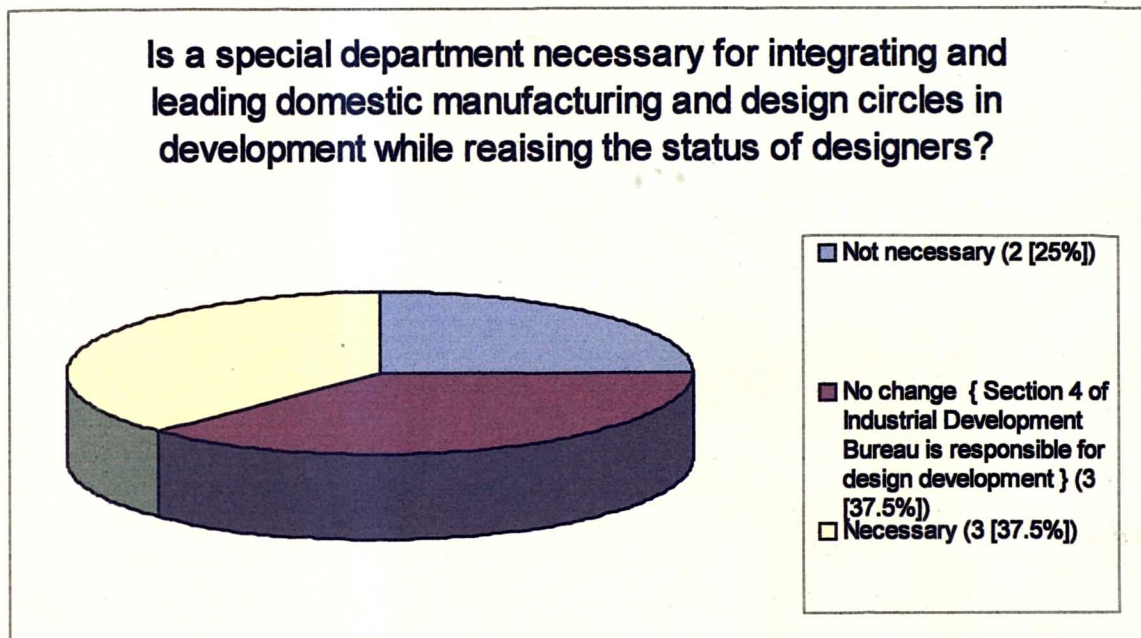
4.4.4

Government Agencies (Including relevant design organisations)

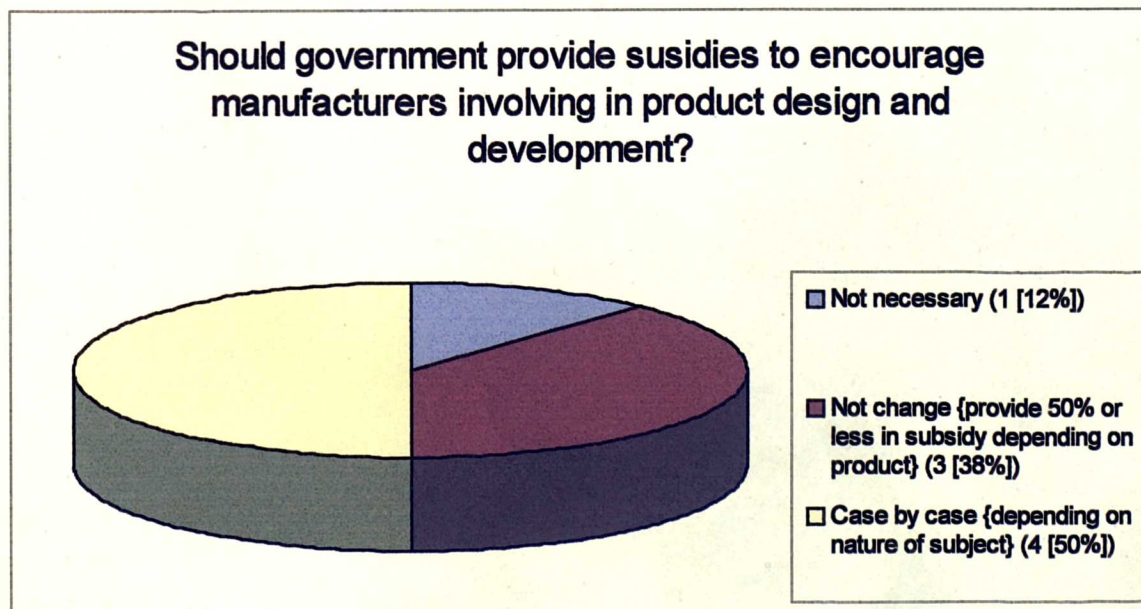
1. Which statements below are the biggest bottlenecks in Taiwan's industrial design development? (Please choose no more than four items.)



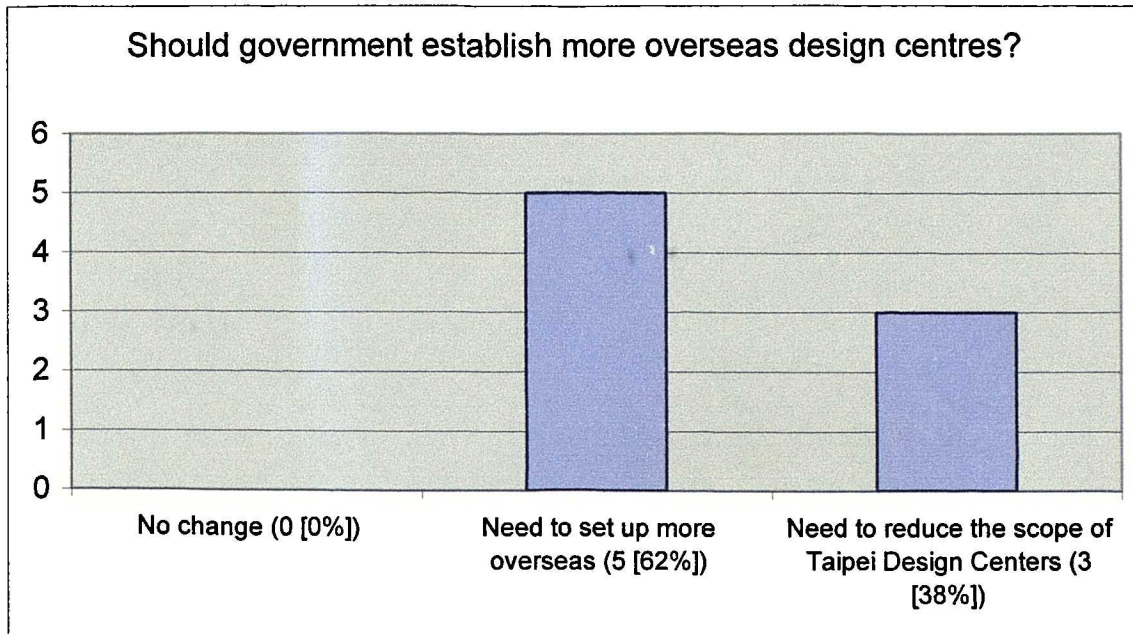
2. Do you think government agencies should establish a special department (design development commission for example) responsible for integrating and leading domestic manufacturing and design circles in design development while raising the status of designers. The department should also be able to inspire manufacturers to pay more attention to design.



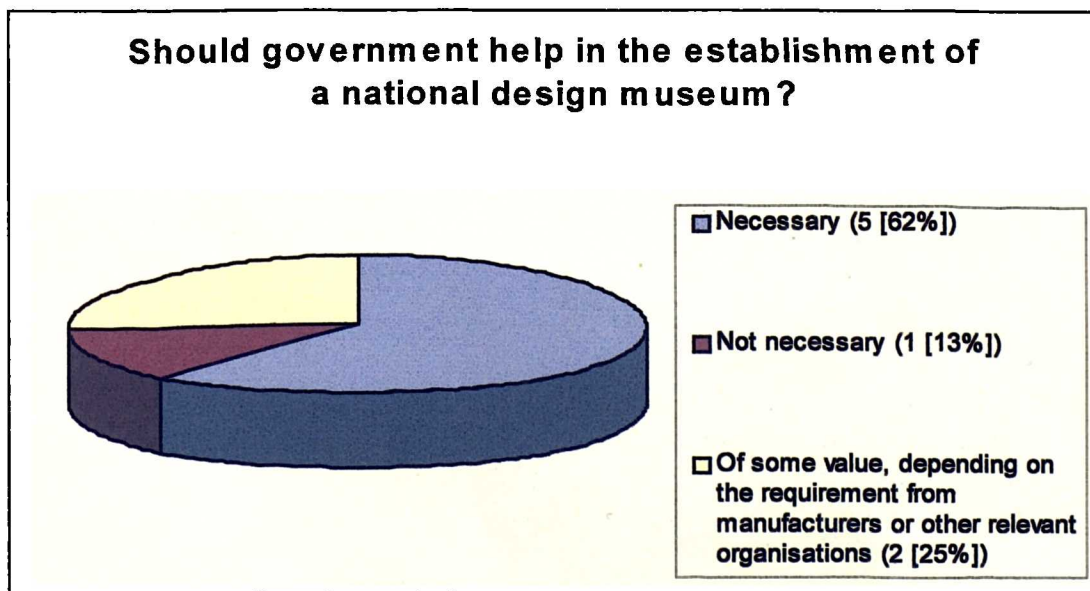
3. Do you think the government should, by providing financial subsidies, encourage manufacturers to seek the services of domestic and foreign design companies in product design and development?



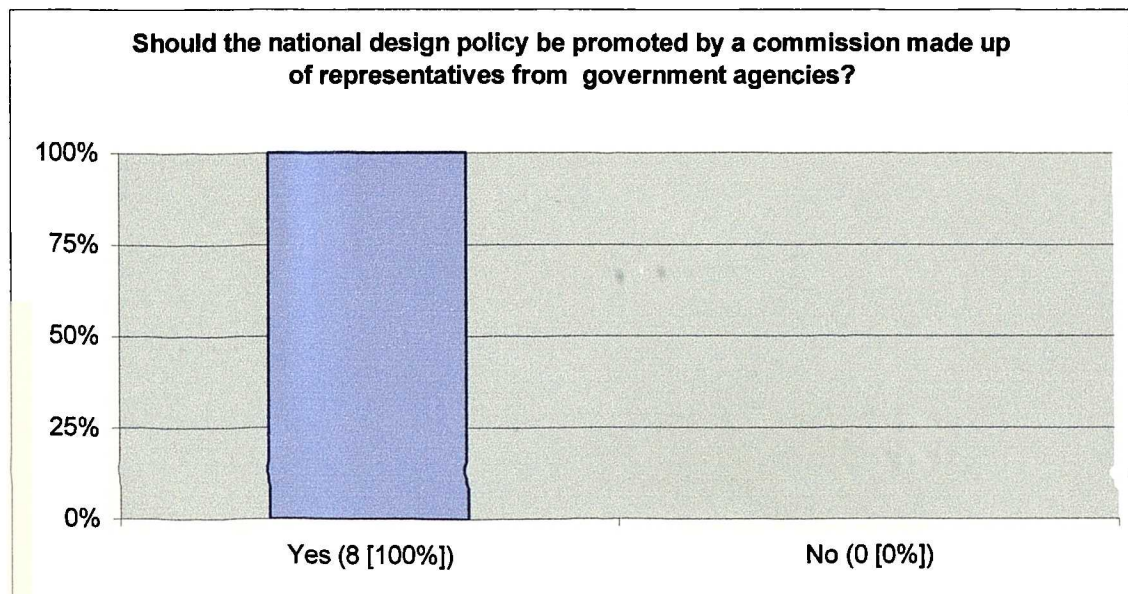
4. In addition to Taipei design centres in Germany, Italy, Japan, and France, do you think the government should establish more overseas design centres as liaison offices for manufacturers, so that foreign design resources can be put to best use?



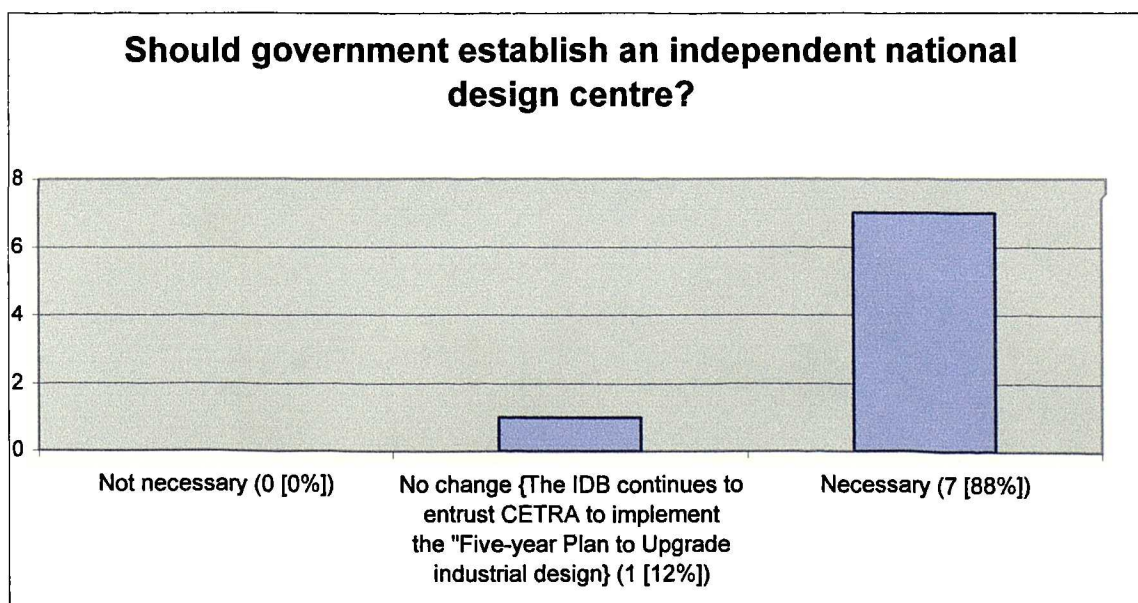
5. Do you think the government should render assistance in the establishment of a museum of products of good design, or a national design museum, thus providing a good environment for the spread of knowledge and creative thinking for the education sector and manufacturers?



6. Do you think the national design policy should be promoted by (a special department) a commission with representatives from government agencies? Should a corporal organisation be entrusted by the government to execute the said policy?



7. At present the government(IDB) has entrusted China External Trade Development Council (CETRA) to implement the Five-year Plan to Upgrade Industrial Design. But CETRA is mainly a trade promotion organisation. Do you think the government should establish an independent "national design centre? "



8. What the government's national design policy should do and how?

①designers' training:

1. Should train professional industrial design talents, the training should contain the following subjects: design management, design decisions, strategy planning, design marketing, intellectual property rights management..etc.
2. Should aim to train talented people towards multi-discipline or multi-ability. Not only design techniques training. The training could include design management, design marketing, design foreign affairs and negotiation, design education and theoretical research, promotion of design..etc.
3. The series of designers' training programme should be inter-connectable, and qualification diploma could be awarded to people who have attended long periods.
4. Provide assistance to design personnel such as design employers, design students or employees who have participated in industrial design. Combine related education body's resource, plan design classes according to the different characteristic of industries.
5. Should train professional designer as a supply of teachers (not the ordinary university theory professors, lecturers)

②planning of design policy:

1. Focus on our current industry position: from high technology products to traditional industry's products, treating them equally. Continue the

policymaking and application, and have strategic plans for the near, mid-term and long-term.

2. Up till now, there isn't enough experience, not enough information, hence the vision isn't big enough.
3. Should upgrade design policy to national design policy.

③establishment of national design center:

1. Should establish as soon as possible. (1 [12%])
2. National design centre should combine different industrial design development as its core aim, support competitive products' development. (4 [50%])
3. In the long term there is a need, but currently the design field mind only their own business, making the establishment difficult. (1 [12%])

④establishment of national design museum

- Need the establishment of the national design museum (5 [63%])
 1. Display mainly local industry field's product.
 2. Aid the public to experience the importance of design.
 3. Only by display regularly, the past experience could be seen, stimulating growth.
- In the long term, there is a need, but currently the design field mind only their own business, making the establishment difficult. (1 [12%])

- No need the establishment since if it is too small, there won't be of any use; if it is too big, there would be a huge cost. (2 [25%])

⑤ Suggestions on the Five-year Plan to Upgrade Industrial Design:

1. Currently the vision isn't enough it is too small. Confined in the assistance of triple matters. The design fields have different concepts, which has a lot of queries.
 2. Should emphasise actual assistance to the industry, decrease the subsidy type of assistance but increase the help in technology research development.
 3. Help the establishment of the long-term design policy of the industry.
 4. Should analyse the problem clearly, come up with solutions according to the problems and distribute the budget according to the effect of the plans.
 5. Should consider how traditional industry absorbs and uses the design resources of the high technology industry, to expand the global market's design information market information's collection and analysis ability. To enforce the usage and combine advanced countries designer resources.
-
9. List of government agencies (including relevant design organisations) that have participated in this research:
 1. Industrial development bureau/Ministry of economic affairs (2)
 2. National bureau of standards/Ministry of economic affairs (1)

3. Mechanical industrial research laboratory/the industrial technology research institute (1)
4. China productivity centre (2)
5. Taiwan foot wear research institute (1)
6. Taiwan textile federation, textile and fashion design centre (1)

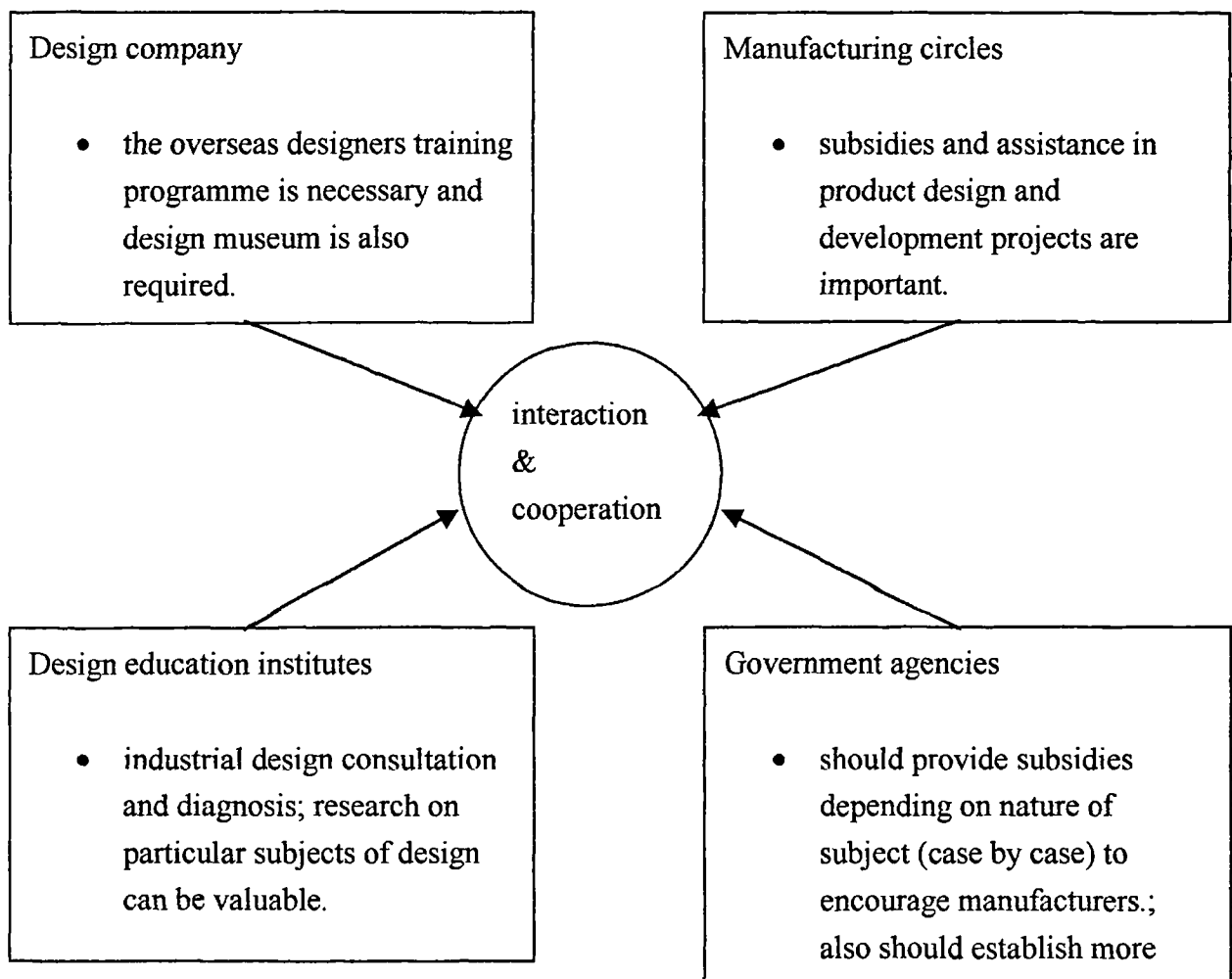
Summary of main findings : Government Agencies

- 1) Conservative concepts from leader(s) of companies and unclear industrial design policy are the biggest bottlenecks in Taiwan's industrial design development. (Questionnaire 1)
- 2) Government should provide subsidies depending on nature of subject (case by case) to encourage manufacturers to become involved in product design and development. (Questionnaire 3)
- 3) Government should establish more overseas design centres, establish a national design museum and also establish an independent National Design Centre. (Questionnaire 4, 5 & 7)
- 4) The national design policy should be promoted by a commission made up of representatives from Government agencies. (Questionnaire 6)

4.5 Conclusion

The surveys described in this chapter suggest that interaction and cooperation among the Government agencies, professional design fields, design education institutes and industries is very important.

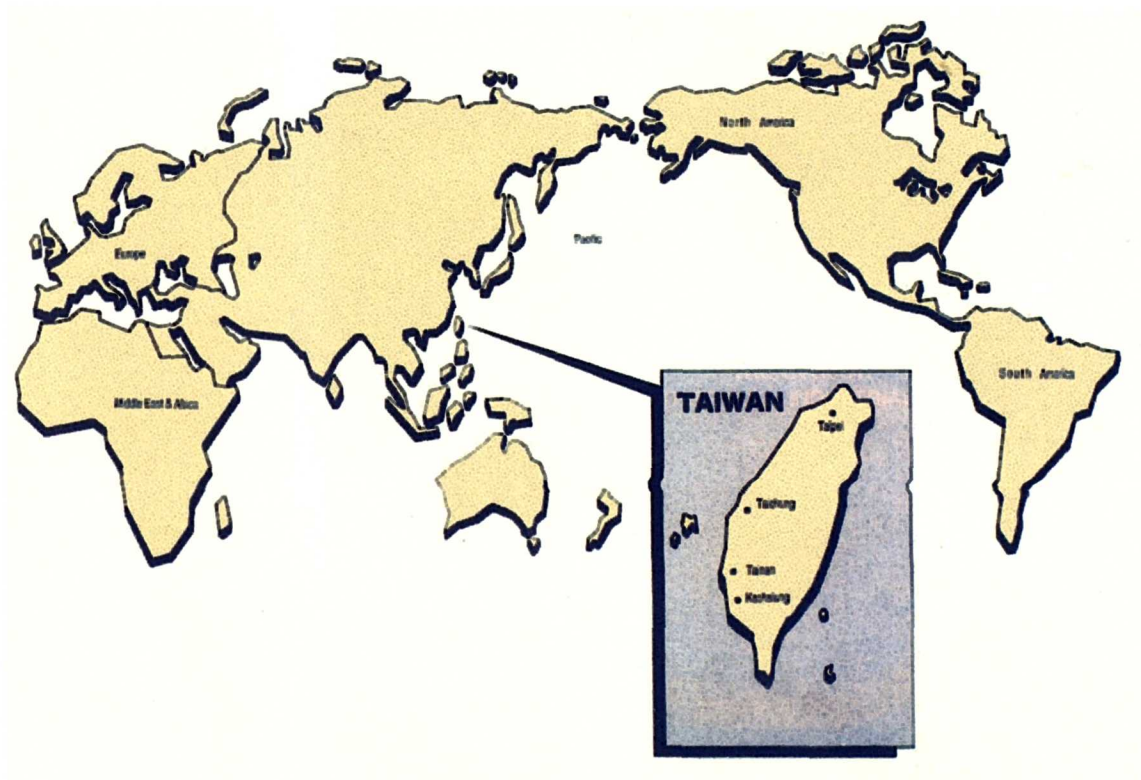
The following diagram summarises the main outcomes from the surveys of each of the 4 main categories:



The requirements of the 4 categories; the manufacturing circles, the design companies, the design education institutes, and government agencies, provide the main reference for the future design strategy and its implementation in Taiwan.

A model for the strategic implementation of design policy in Taiwan

Chapter 5 Evaluation of Findings



A model for the strategic implementation of design policy in Taiwan

| | | |
|------------------|--|----------------|
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Chapter 5 Evaluation of Findings

5.1 SWOT analyses

According to the findings from the literature review and comparative study in chapter 3 and the analysis In chapter 4, we shall conclude the strengths, weaknesses, opportunities and threats (SWOT) of the manufacturing circles, design companies and design education institutes in Taiwan.

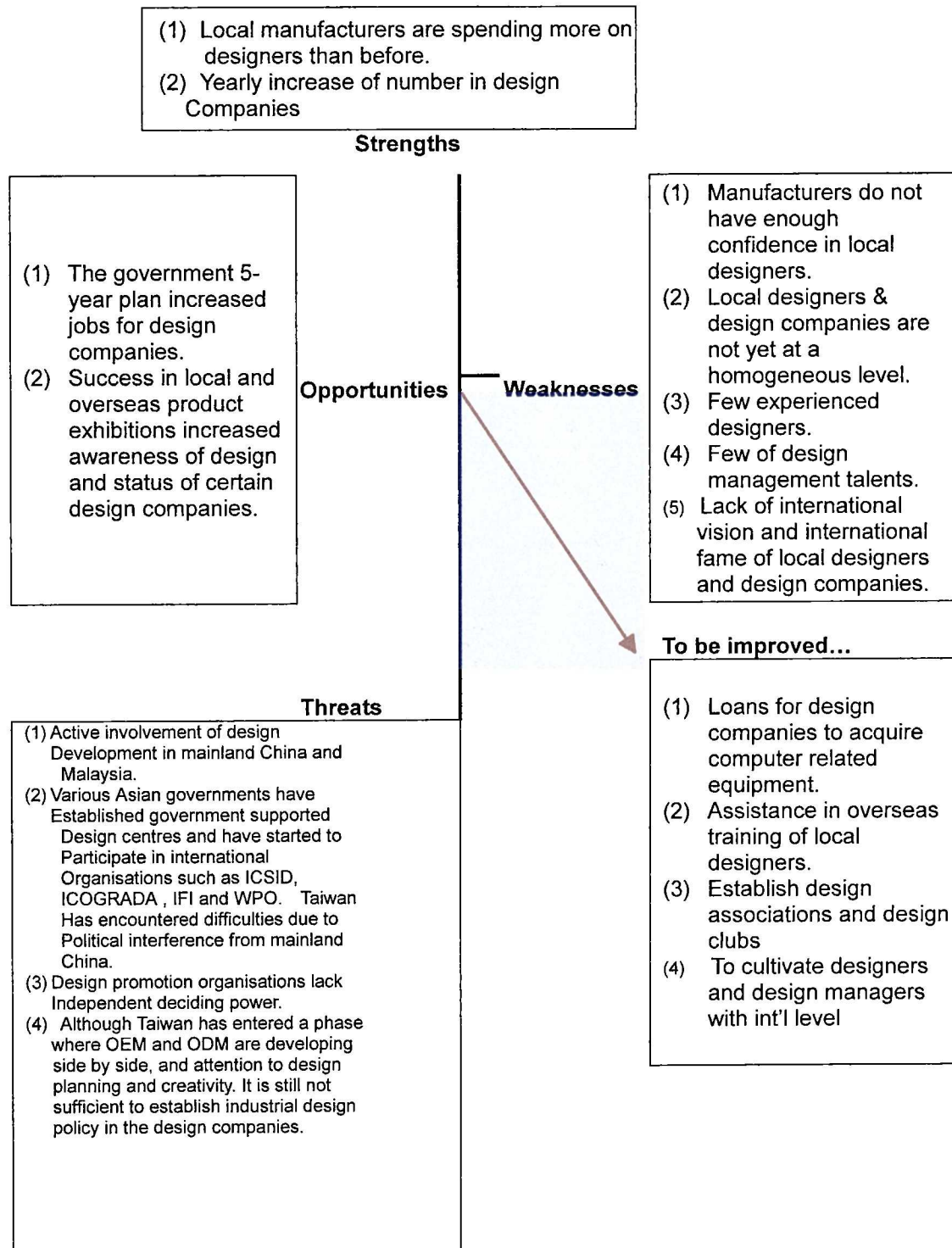
The adapted use of SWOT analyses

SWOT analysis was first used in the accepted way to identify the strengths, weaknesses, opportunities, and threats for each category; manufacturing industries, design companies, design educators and government. However a further step was introduced to identify the potential improvements by reference to the literature and information search and the finding from the surveys in chapter 4. The additional step extracts the priority issues for developing and testing the model and enriched the use of the tool from analyses to interpretation.

5.1.2 Design Companies

Strengths, weaknesses, opportunities and threats (the SWOT situation)

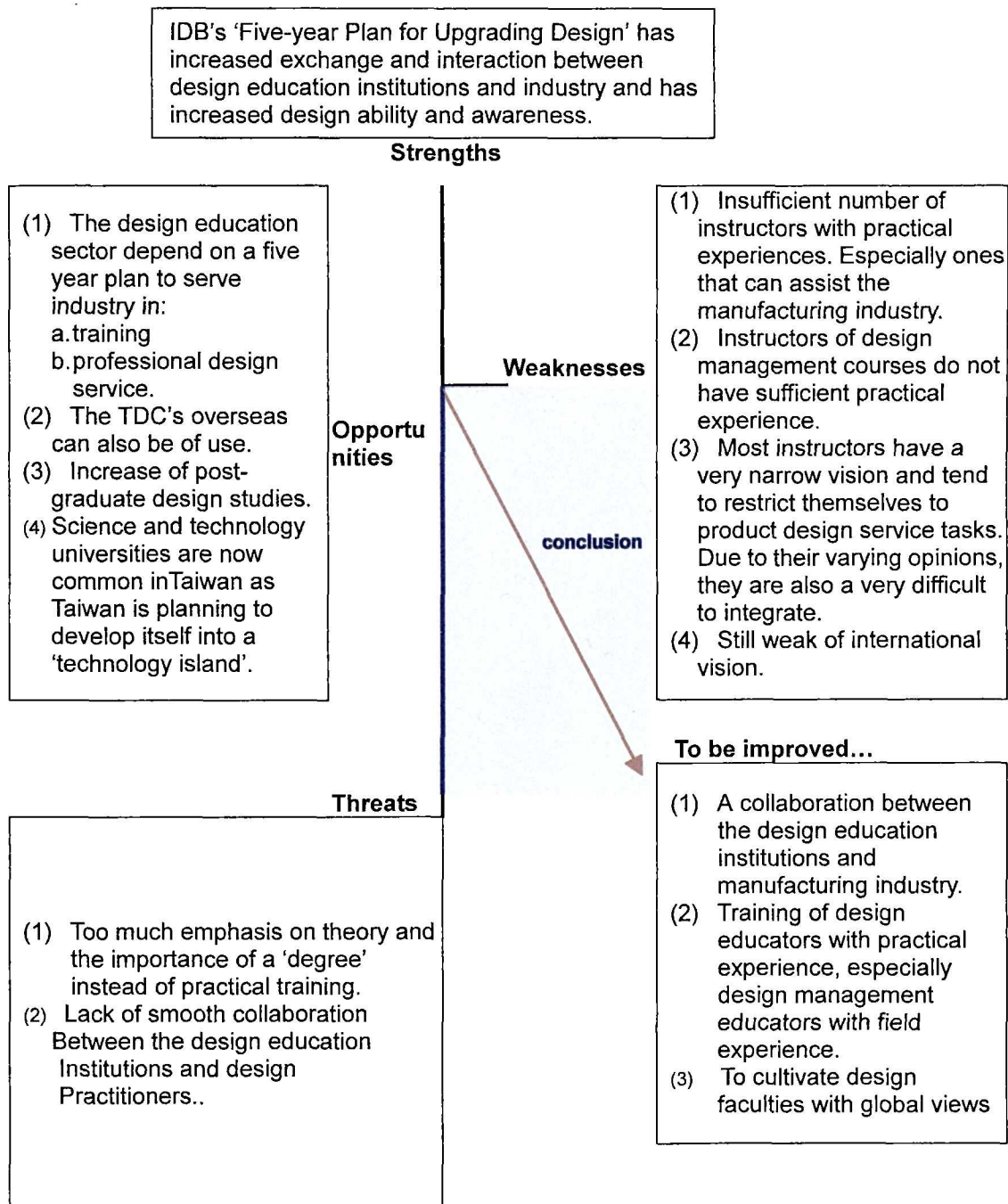
in the Taiwanese design companies:



5.1.3 Design Educators

Strengths, weaknesses, opportunities and threats (the SWOT situation)

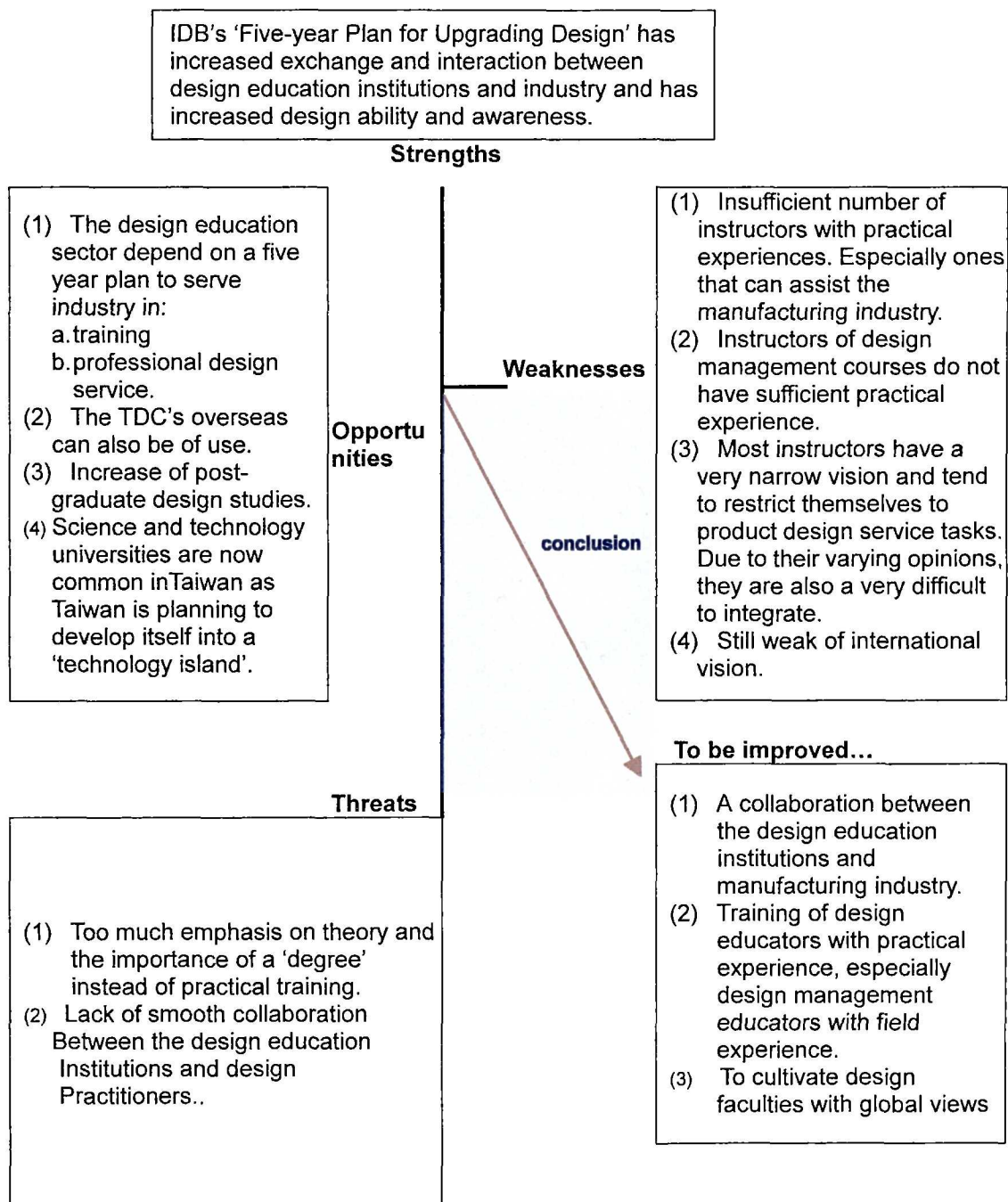
In the Taiwanese design education sectors:



5.1.3 Design Educators

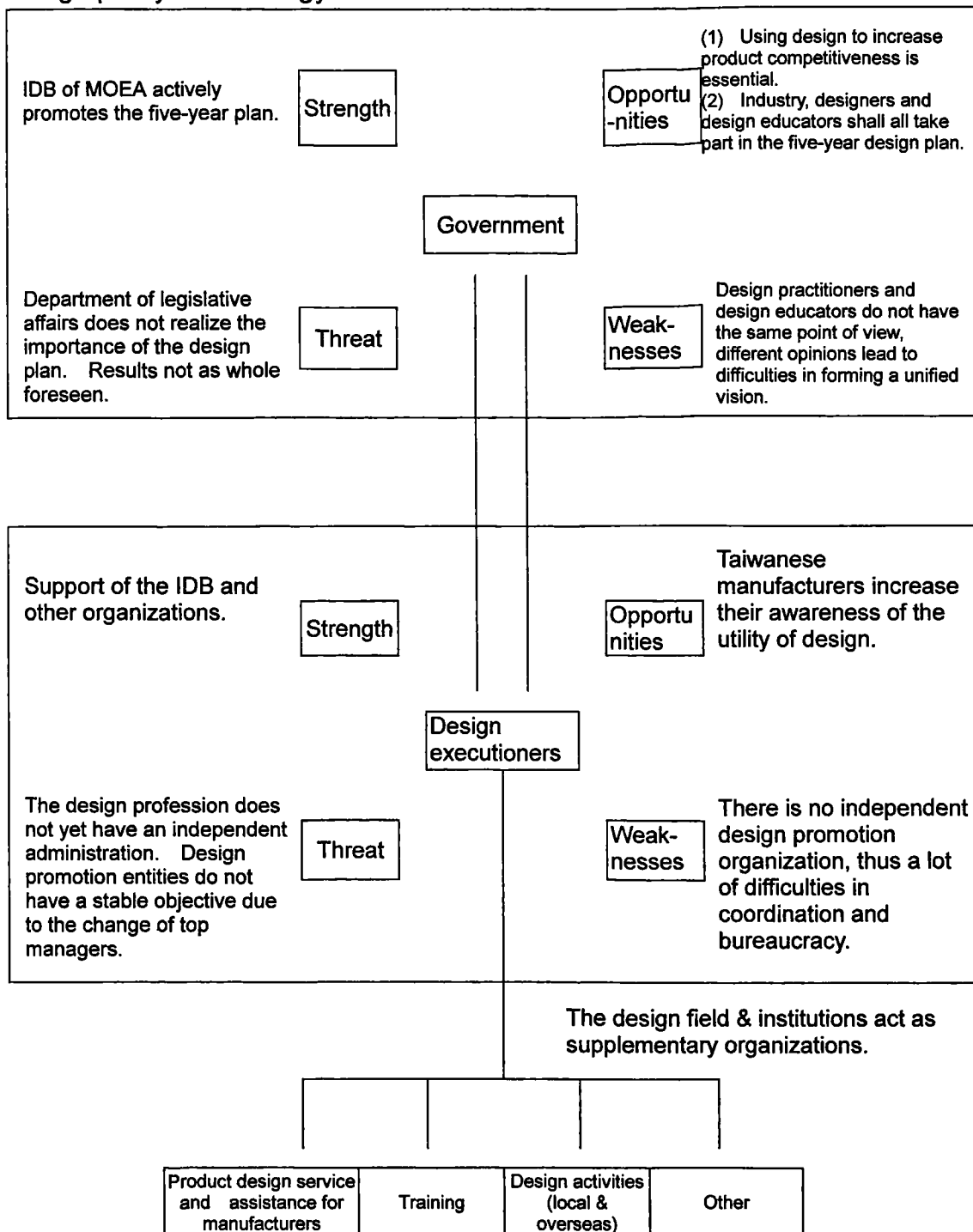
Strengths, weaknesses, opportunities and threats (the SWOT situation)

In the Taiwanese design education sectors:



5.2 Flow chart of execution of the design plan in Taiwan

Following the extended SWOT analyses showing the relationship between government and the three main parties, there follows a flow chart to further examine the challenges between government and those who executes design policy and strategy.



5.3 Arguments-Issue-Conflict

According to the findings from the literature review, and comparative study in Chapter 3 and Chapter 4's Questionnaire and Analysis of findings, we have concluded the SWOT (Strength, Weakness, Opportunity, Threats) of the manufacturing circles, design companies and design institutes of Taiwan, but we could also find some interesting arguments.

The arguments among the manufacturing, design companies, design education institutes, government bodies and specific legal entity unit (CETRA, CPC, CIDA) ...etc are as follows:

| 5.3.1 Problems questioned by the manufacturing, design companies and design Education institutes towards the government bodies and specific legal entity unit for solution: | Remarks |
|---|----------------|
| <ul style="list-style-type: none"> ● Manufacturers: 1. The product design and development project needs government subsidy. 2. Provide funds to industries to dispatch senior designers to the mid-long term overseas training. 3. Need actual services for product design. 4. Provide overseas design information according to category and market information to enable overseas exploration. 5. Difficult to find suitable designers, at the same time there is lack of design management talents. 6. Establish design technology development center, providing manufacturers latest design technology information. 7. Establish design information center, providing manufacturers design and market information. 8. Need of design seminars and design promotion in central and southern Taiwan. | |

| | |
|--|--|
| <ul style="list-style-type: none"> ● Design companies: 1. Low interest loans for design companies to acquire computer related equipment. 2. Assistance in the overseas training of designers. 3. Establishment of designers associations and design clubs. 4. Cultivation of designers and design managers in an international level. 5. There are two directions for designer talents: <ul style="list-style-type: none"> A . Attend overseas professional design institutes for short-term training or work in overseas TDC---Taiwan Design Center as guest designers. B . Foreign and local designers work together and collaborate. 6. Combine overseas research organizations with market consulting companies to find directions of market information and services. 7. To emphasize service as the priority for the National design center, not to consider it as a profiting unit. It needs to sustain some pressure to enable them to provide good design development and services. | |
| <ul style="list-style-type: none"> ● Design education institutes 1. Government doesn't need to interfere with jobs that the local firms (manufacturing and design companies) can do well. Currently, Taiwan needs overseas market exploration and internationalization of design companies. 2. Provide opportunities for school teachers and manufacturers to collaborate hence improve actual experience. Currently, most of the design seminars are in Taipei, suggestion for a balance of the northern and southern part of Taiwan. 3. In product development, government should provide different levels of funding according to collaboration funds from the manufacturers. 4. According to the design projects, there are three degree of the funds from the manufacturers: A. 0% B.30% C.50% 5. Improve media's advertisements. 6. Draw up a long-term national design policy, to provide our design and education bodies a direction. 7. Reward designs of national emphasized technology industry and encourage designs of Taiwan cultural products. 8. Help different design education institutes to establish design centers, and combine them into the national design center's structure. 9. Establish regional design centers nation wide to provide better and faster services. 10. Should expand and combine the resources of the Council of Cultural | |

| | |
|---|---|
| Affairs, and Board of Foreign Trade of the MOEA...etc, to promote export of design and foreign relations. | |
| 5.3.2 Problems questioned by the design companies and design education institutes and government bodies with specific legal entity unit towards the manufacturers for solution: | Remarks |
| <ul style="list-style-type: none"> ● Design companies: <ol style="list-style-type: none"> 1. Manufacturers produce according to OEM and ODM system, hence product design and creativity has still not been emphasized. This is not favorable for design policy of industry. 2. Industry still does not fully trust Taiwanese local designers. | OEM: Original Equipment Manufacturing ODM: Original Design Manufacturing |
| <ul style="list-style-type: none"> ● Design education Institutes: <ol style="list-style-type: none"> 1. Provide design education institute's teachers opportunity to communicate with industry, to improve actual experience. | |
| <ul style="list-style-type: none"> ● Government bodies and specific legal entity unit: <ol style="list-style-type: none"> 1. Design management talents are not enough. 2. The design policy is not clear. | |

| | |
|---|---------|
| 5.3.3 Problems questioned by the manufacturers, design education institutes and government bodies with specific legal entity unit towards the design companies for solution: | Remarks |
| <ul style="list-style-type: none"> ● Design education Institutes: | |
| <ul style="list-style-type: none"> ● Government Bodies and specific legal entity unit: <ol style="list-style-type: none"> 1. Design management talents are not enough. | |
| <ul style="list-style-type: none"> ● Manufacturers: <ol style="list-style-type: none"> 1. Designers need international vision. 2. Difficult to find suitable designers, at the same time there is not enough design management talents. | |

| | |
|--|----------------|
| <p>5.3.4 Problems questioned by the manufacturers, design companies, and government bodies with specific legal entity unit towards</p> <p>The design education institutes for solution:</p> | <p>Remarks</p> |
| <ul style="list-style-type: none"> ● Government bodies with specific legal entity unit: <ol style="list-style-type: none"> 1. Independent and experienced lecturers and experienced design management teachers are not enough. 2. Teacher who can provide help to manufacturers is not enough. 3. Narrow vision and tends to restrict themselves to minor tasks. Due to their varying opinions, they are also very difficult to integrate. 4. International view of design is still weak; design education and design practice, collaboration is also weak. 5. Should improve the collaboration with the manufacturers. 6. The current education system emphasizes theory and degrees, which restricts the development of actual design practice. 7. Should cultivate multi-talented people, not only in design skills training. It should include the following: Design management, design marketing, design diplomacy and negotiation, design education and theory research, design promotion and development...etc. 8. Should cultivate professional design lecturers (not the institutes theory based professors, tutors). The current situation is that there is are enough theory based lecturers, but not enough application based lecturers. | |
| <ul style="list-style-type: none"> ● Manufacturers: <ol style="list-style-type: none"> 1. <i>Designers should have international view.</i> 2. Design graduates still lack design ability and actual design experience. 3. <i>Difficult to find suitable designers, at the same time there is not enough of the experienced design management.</i> | |
| <ul style="list-style-type: none"> ● Design companies: <ol style="list-style-type: none"> 1. Education institutes need to improve design practice education. Should start from recognition of the basic products, cultivate a new generation of designers. So the design can be more practical, and products commercialized. | |

5.3.5 Conclusions

The government bodies, specific entity unit, the manufacturers, the design companies, and the design education institutes share the same vision and ideas on 1) cultivating designers and design managers 2) product design and innovation 3) raising enterprise images 4) increasing international competitiveness. However, the government bodies, specific entity unit, the manufacturers, the design companies, and the design education institutes want to meet their own demand and goals.

For example, the manufacturers mainly request market expansion and provision of product design information, and also need well-experienced designers and design managers. The manufacturers are expected to emphasize the importance of designers and innovation of new products. The design companies request the cultivation of designers and design managers at international level to create design business. The design companies are expected to have well-experienced high level designers.

The design education institutes request to have well-experienced instructors, and continue cultivating exceptional designers. The design education institutes are expected to combine with reality, and continue cultivating designers to serve the industry. The government bodies request the industry and others to pursue and follow government policy to continue cultivating designers and developing competitive products. The industry and others are hoping to have funding support from the government bodies, and have working opportunities on related events. As a conclusion, the government bodies, specific entity unit, the manufacturers, the design companies, and the design education institutes need to interact and help each other to succeed.

5.4 Organizations that execute design policy in Taiwan

| No | Title | Function | Future Development & Requirement |
|----|--|--|---|
| 1 | (1) Government shall appoint an official administrator of the design policy | (1) Remain as it is. Maintain the status quo: DPC/CETRA is currently appointed to implement IDB's '5-year plan for upgrading design'. | (1) Maintain the status quo: Percentage: government & legislature 12% Design companies 29% Education institutions: 0% Industry: 0% |
| | | Establish a specific legal entity unit responsible for executing and assisting in the design plans. | (2) Appoint a specific legal entity unit: Percentage: government & legislature 12% Design companies 29% Education institutions: 0% Industry: 0% |
| | (2) Establish a National design Center | Shall have an independent administration to ensure promotion of design to the entire nation. | (1) Needs to have the following proportions: Government & legislature: - 88% Design companies: - 43% Education institutions: - 79% Industry: - 18% (2) IDB shall establish an administrative unit. (38% yes) (3) Assist all educational institutions to establish design centers and also establish branch design centers in the northern, central and southern part of Taiwan. |
| 2 | Establish a National good design display center or National Design Museum. | A design display center will display Taiwan and global good design and have an educational purpose. | Need to establish: Percentage: government & legislature 62% Design education sectors 86% Design companies 0% Industry: 0% |
| 3 | Establish Taiwan Design Centers overseas | (1) Serve as an overseas liaison and assist them in using these overseas design centers. (2) Supported by IDB, Taiwan has already established design centers in Dusseldorf, Milan, Osaka and a fashion design center in Paris. Another design center in San Francisco will be established in 1999 | Need to expand: Percentage: government & legislature 62% Design education sectors 0% Design companies 0% Industry: 0% |

Note: 1. DPC stands for 'Design Promotion Center'. 2. IDB stands for 'Industrial Development Bureau'

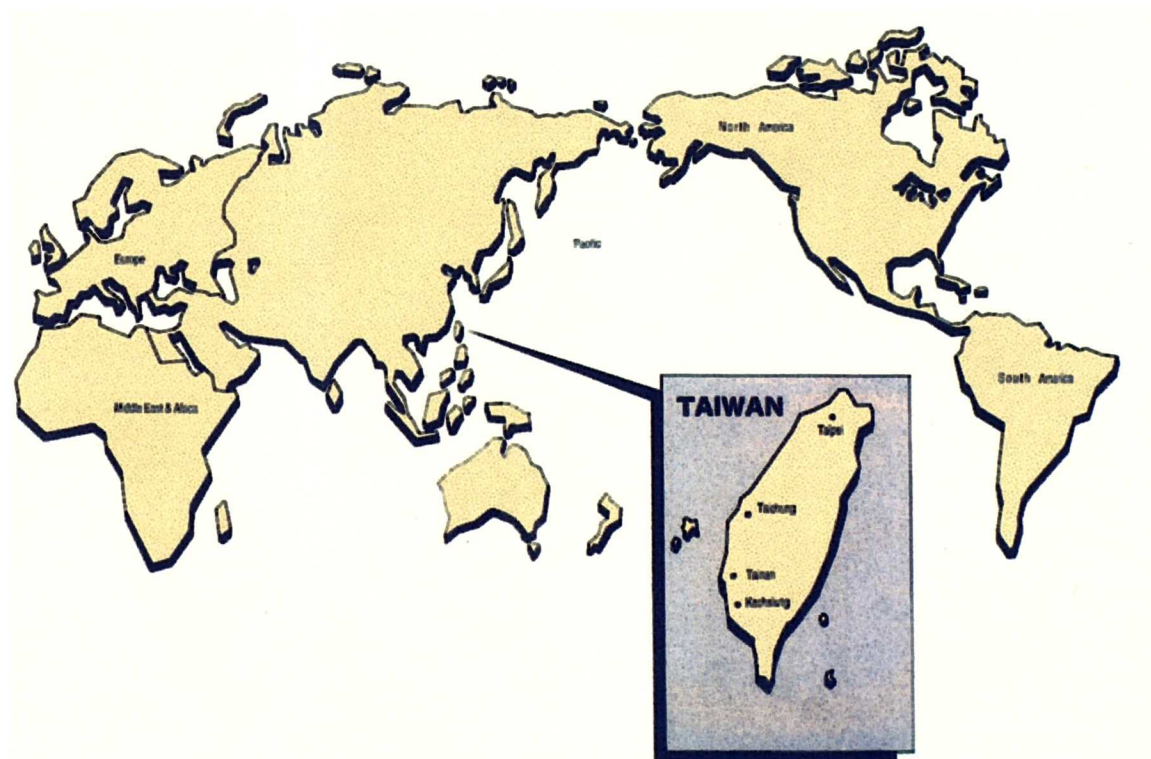
Chart 5.4 derived from the comparative study in chapter 3 and the main surveys in chapter 4 shows the following important findings:

- 1) Government should appoint an official administration of the design policy.
- 2) They should establish a national design centre.
- 3) They should establish a national design museum.
- 4) They should establish further design centre overseas.

These four items provide the foundation for developing the new model in chapter 4.

A model for the strategic implementation of design policy in Taiwan

Chapter 6 Development of the new model



A model for the strategic implementation of design policy in Taiwan

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6.1 Background and Formulation of the new model

6.1.1 The industrial practices

According to the study of the previous chapters, from the 1970s to May 2000, Taiwan industry went through the OEM, ODM, and OBM different methods and systems of development. The concepts of the three different methods and systems are continue to be used and applied in Taiwan industry, but the majority of the industry still operates under the OEM method and system. The ODM concepts are applied into some companies' operation. The OBM concepts are applied to very few companies for establishing its own brand on exports and imports, because at an international level, the design image of Taiwan products is still far from being recognised. Also due to the large amount of capital necessary for promoting and establishing own brand, the Taiwan industry is unwilling to invest. As a result, it is necessary to have trusted worthy policy and organisation for assisting industry to apply design capability, innovation of new products, and establishing Taiwan's own brands.

6.1.2 The successes and failure of the previous five-year plans

For enhancing the level of product design and building up the image of the product and enterprises, the Taiwan government has since the 1980s established the "Quality", "Design", and "Image" of three five-year plans. "The five-year plan for design" affected the Taiwan designers, product and enterprises the most. This five-year plan for design started from 1989 to 1994 for the first

term, 1994 to 1999 for the second term, and 1999 to 2004 for the third term. These three five-year plans are the blue print of “national design policy” promoted by the Taiwan government.

1. The main criteria of the five-year plan are as follows: 1) training programme of design practices 2) product design development and consultancy 3) research and development 4) design and market information 5) design promotion 6) international service network with overseas Taiwan design centres 7) international promotion of design activities. Under the promotion of the Industrial Development Bureau/MOEA, the majority of the five-year plans are continued as the schedule. The plan affected both design enterprise and industry in a certain way, especially regarding the international promotion of design activities. Taiwan held ICSID Design Congress successfully in 1995. Unfortunately after 1998, due to the replacement of the secretary general of CETRA, the design business had weakened drastically. Because of the replacement, this creates doubts about the progress and development of the Taiwan design field.

2. Leading Unit

The IDB/MOEA sponsors and supports the five-year plans for design, especially on industry product guiding.

3. Following Unit

A. main unit: 1) Design promotion centre/ CETRA 2) CIDA 3) CPC

B. supporting unit: 4) all relating majors in the college or university 5) Taiwan overseas design centre in Germany, Italy, Japan, France, USA.

Although the replacement of the Secretary General of CETRA weakened the business of design promotion, the majority of the plan still continues, but the limited funding makes the expansion and developing of the design business difficult. As a result, how to closely combine the *main unit and supporting unit* for the follow up five-year plan is the main work of the Taiwan design policy.

6.1.3 The evaluation of design strategies policies in other countries

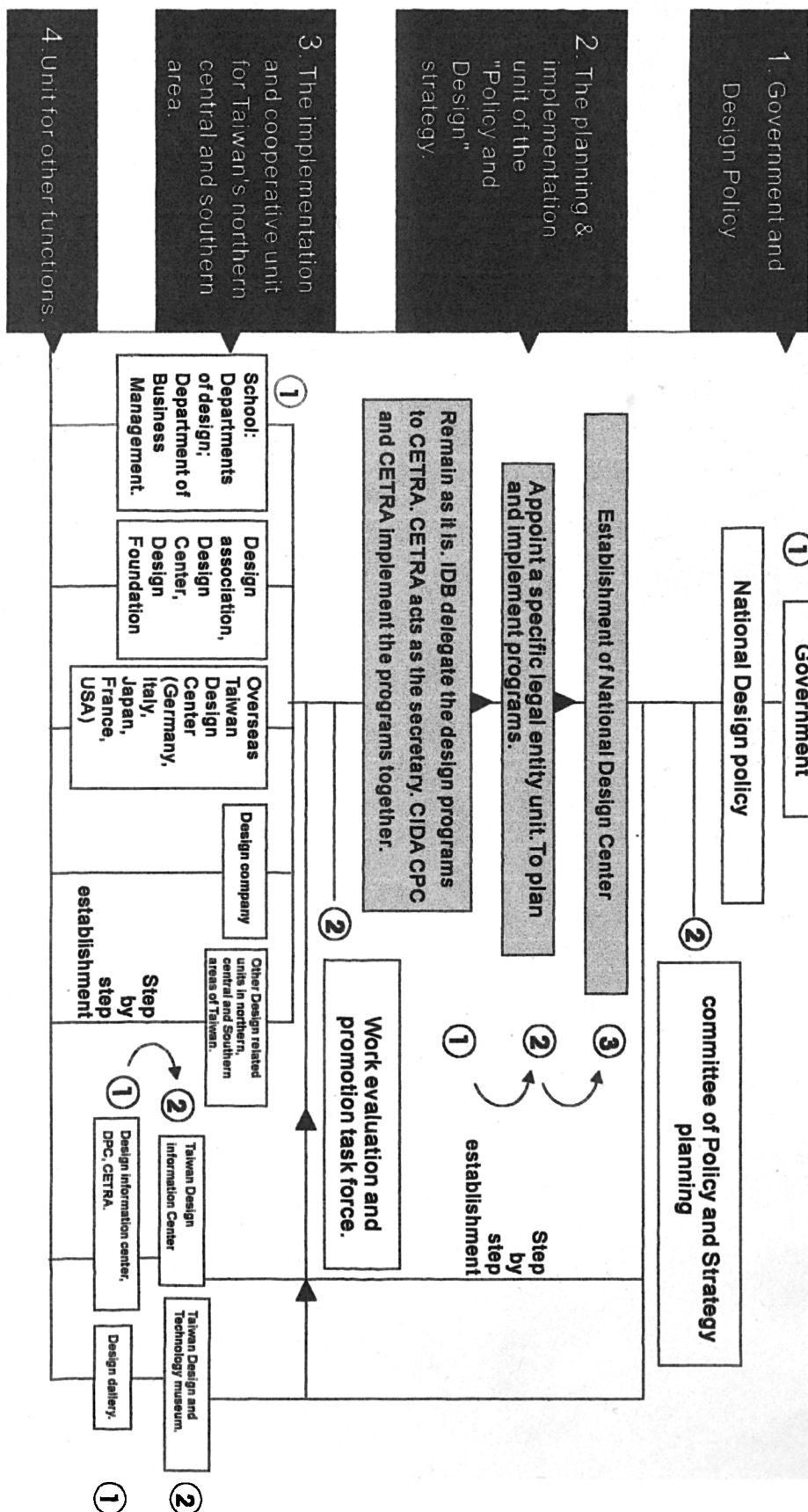
According to Chapter 3 and Chapter 5 “A comparison of Taiwan and various national design policies” the, UK, Germany and Japan have clearly established their own “national design policy”. On the other hand, the governments of Taiwan and Korea support all kinds of design activities, and are gradually forming the national design policy. Although USA, Canada and Italy have no national design policy, these countries still selectively support certain design competitions and design show activities. As a result, the positive support from the government plays a key role for the effects and success of the design promotion activities, from the industry, specific legal entity unit or committee.

6.1.4 Conclusions

According to Chapter 4 and Chapter 5, currently the five-year design plans from 1989 to nowadays promoted by the IDB/MOEA is as Important as the design policy foundation of the UK, Germany, and Japan. Furthermore, creating a new designing model for the Taiwan Industry, design companies and educational entities is a necessary step. The following is the diagram of the new design model.

Chapter 6. Development of the new model

The diagram of the new design model



6.2 — Proposal of the new model of Design Policy in Taiwan

The explanation of the Frame of the organisation structure

6.2.1. Government and Design Policy.

(1) According to the analysis in chapter 3, U.K., Germany and Japan, for these three countries' design has been supported directly by the government. At the same time, they have established a national design policy.

1. **U.K.** follows the department of trade and industry; other regional governments are left for the government to collaborate.
2. The **German** design council (Rat fur Formgebung) is the national representation body for the promotion of design in Germany. It is a non-profit making foundation inaugurated in 1953, on the basis of a resolution of the German parliament. It is also funded by the federal minister for economic affairs and the city of Frankfurt.
3. **Japan's** design promotion is mainly the responsibility of the ministry of international trade and industry (MITI), and collaborated by the local government unit.
4. **U.S.A's** (IDSA) compete for the government's " NEA -- national endorsement of art's " support.

Canada's Design exchange (DX) is a design promotion unit supported by the government.

Italy's (ADI) is also competing for government's Italy external trade institute

(ICE) and regional government's support.

Korea's MOTIE (the ministry of trade industry & energy) established a design policy division. This new division supports design development based on "five year design development plan".

5. **Taiwan**, beginning in 1989, the Industrial Development Bureau (IDB) under the Ministry of Economic Affairs (MOEA) has implemented the five-year plan to upgrade industrial design. Ten years have passed since this implementation, and this has provided a good foundation for the establishment of the national design policy. Also, according to the research and analysis in chapter 4, IDB's design promotion plan has been recognition by Industry. Hence, the design policy should be established and conducted by the MOEA's IDB.

From the research above, we could conclude that the definition of " ***the National Design Policy*** " is as follows:

A National Design Policy is formulated to upgrade the level of product quality, design and image in order to raise the level of industrial competitiveness, improve the living conditions of its citizens and enrich its cultural life to create a highly civilised society. A national design policy is usually formulated by a country's industrial, economic or trade authorities in charge and then entrusted to a design association or design centre or design promotion related organisation to draw up and implement the projects.

(2) Committee of policy and strategy planning:

The committee consists of representatives from the government, design industry, design education and manufacturers. The main purpose is to propose and modify a work plan suggested by the planning and implementation unit of the policy and design strategy.

The U.K. design council invited relevant professional bodies and organisations to form an advisor group to council. During the implementation of Taiwan's third term of the 5-year plan, a strategy-planning committee was established. Thus, there is a need for the policy and strategy planning committee to be organised in this way within the Frame of the organisation.

6.2.2. The planning & implementation unit

Of the policy and Design Strategy:

According to industry's needs, it is necessary to research and construct a strategy plan. The structure of the implementation plan is divided into 3 phases, and is established step by step:

- (1) Remain as it is (IDB delegate the design programmes to CETRA, CIDA, CPC and CETRA implement the programmes together. And government – IDB supervise,)
- (2) Appoint or establish a specific legal unit; government could comply with actual policy needs by appointing or establishing a specific legal unit, to integrate the plan and implement programmes.
- (3) Establishment of National Design Centre Government can comply with the actual and policy needs to establish a National Design Centre in order to integrate National Design Resources.

U.K.: The government has entrusted Design Council UK to exclusively plan and implement, then the design association is entrusted to establish national business links to aid the manufacturers.

Japan: Planing and implementation is the responsibility of by the Japan industrial design promotion organisation (JIDPO) directly supported by the Central government. Local government bodies then entrust local societies, such as the Japan industrial design association (JIDA) and Design centre, Osaka, Japan ...etc to aid manufacturers.

Germany: Government entrusts it's design council to exclusively plan and implement, at the same time helping local authorities and local design centres to service the local manufacturers.

Taiwan: Currently, IDB of the MOEA entrusts CETRA,CPC and CIDA units to plan and implement, then Taiwan's northern, central, and southern University are divided into units for implementation. The current situation is gradually researched and plans drawn up step by step. The government should appoint or establish a specific legal unit to integrate the plan and implement programmes, then, plan research and draw up the establishment of national design centre.

This method is a creative concept in Taiwan.

6.2.3. The implementation and cooperative unit for Taiwan's northern, central and southern area:

- (1) Consider the needs of Taiwan's northern, central and southern areas' functions, implement cooperatively by suitable design related units.
- (2) Task force is formed by participating members of the implementation and cooperative units. Focus on the progress of the cooperative units work plan, reviewing its quality, to promote the plan further.

6.2.4. Units for other functions:

In the initial stage, it can be attached to the planning for implementation unit of the policy and design strategy, it will be independent until it reaches a certain scale.

- 4.1 Information: According to the analysis in chapter 4 "design and marketing information" is very important for Taiwan Industry and Design's sector. Information is divided into two phases, established one after another:

- (1) Design information house.
- (2) Taiwan design information centre (establish a network of service and international design information to provide product design, market information, core design techniques, information on professional resources etc to Taiwan's industry)

4.2. Design museum: Divided into two phases established step by step:

(1) Design gallery.

(2) Taiwan design and technology museum. (Exhibition of Taiwan and overseas good design techniques and products).

For example: There are "Design Museums" in London (U.K.), Essen (Germany), Nagoya (Japan). All of them are display regional and international good design and technology products. Design Museums in UK and Japan, also display some of the Good products design which are also for sale. These are arranged in a particular space as a gallery, and it has achieved a good result. Taiwan has been promoting good design programmes for more than 10 years, and these have achieved a good result. This suggests a good reason and a propitious time for Taiwan to establish a national design and technology museum.

Chapter6 Development of the new model

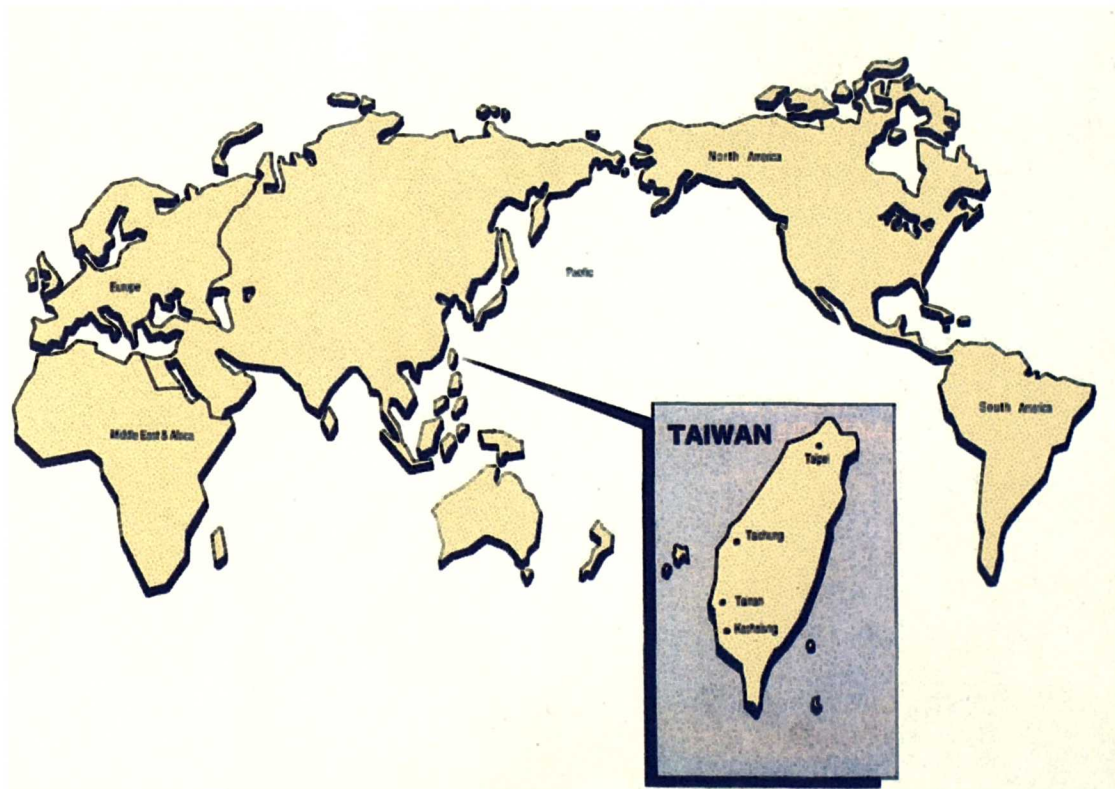
6.3 The new model of Design Policy in Taiwan – Key points for strategy and implementation.

| | | | |
|---|--|--|---|
| 1 | Training program of design practice. | <ol style="list-style-type: none"> 1. Cultivate designers with global vision, planning and creative capabilities 2. Cultivate experienced design managers. 3. Cultivate experienced design management faculties 4. Training of the collaborations and interaction of design education and design practice. 5. Overseas short term design studies. 6. Application of computers for design. | |
| 2 | Design and market information. | Research in design information and promote the usage according to industry type, product type and market type | <p>Design information Center, DPC/CETRA</p> <p>↓</p> <p>Taiwan Design information center.</p> |
| 3 | Assistance in product design | <ol style="list-style-type: none"> 1. Usage of intellectual Properties rights in design. 2. Usage and draw up in design policy 3. Product planning and design. 4. Product design and market development. | |
| 4 | "National promotion of Design activities". | <ol style="list-style-type: none"> 1. Promotion; exhibition, presentation of Taiwan's good design, seminars and promotion. 2. Design competition according to different types of products. 3. Hold International design competitions. 4. Participate in Overseas international design competitions, Design fairs and related activities. 5. To recommend and giving awards of excellent design annually to companies (which has in-house design departments), design professionals, design scholars, and design promoters | <p>Design Gallery</p> <p>↓</p> <p>Taiwan Design and Technology museum.</p> |

| | | |
|---|---|---|
| 5 | International service network provided by Overseas Taiwan design centers. | <ol style="list-style-type: none"> 1. Use the current overseas Taiwan design centers services in Dusseldorf (Germany), Milan (Italy), Osaka (Japan), Paris (France) and San Francisco (USA). 2. Could put in consideration the following when expanding the network: <ol style="list-style-type: none"> a) Hong Kong, Tokyo (Japan) and Malaysia as Taiwan's key position b) U.K. one of the place of origin of European design. |
| 6 | International promotion of design activities. | <ol style="list-style-type: none"> 1. Collaborate with international design organizations such as ICSID, ICOGRADA, WPO, IFI, etc... 2. Collaborate and interact with Asian design cooperations through AMCOM. 3. Make use of the overseas Taiwan design centers and international organizations to enhance collaborations between local and overseas design fields. |
| 7 | Public relation and promotion through media. | <ol style="list-style-type: none"> 1. Taiwan and international promotions through media (including the 6 items mentioned above). 2. There are demands for Taiwan's northern, central and southern areas advertisement. |
| 8 | Other items related to design. | <p>Suggestions:</p> <ol style="list-style-type: none"> 1. Propose and establish Taiwan design management foundation, designer's association and designer's club. 2. Communicate with ministry of education and propose the plan of industrial design education in Taiwan development plan to emphasize the functions of design practice and development of creativity. Design education is suggested to begin from primary and high school. 3. Taxation reward measure: make use of the policy of "subsidising investment by purchasing automated equipments or technologies", and "custom tax regulations on imports" to assist manufacturers who apply industrial design with importing equipment exempted from duty. At the same time, assist design firms with loan for the purchase of computer equipments. 4. Recommend domestic and overseas design talents to different industry. 5. Other design recommendations for government, industry and education fields. |

A model for the strategic implementation of design policy in Taiwan

Chapter 7 Evaluation: Testing the new model of the Design Policy in Taiwan



A model for the strategic implementation of design policy in Taiwan

Chapter 7 Evaluation: Testing of the new model of the Design Policy in Taiwan279-311

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Chapter 7 Evaluation: testing of the new model of the design policy in Taiwan

7.1 The purpose of testing:

To testify the result of the research:

“Proposal of the new model of design policy in Taiwan

-----Formulation of the new model: Organisation Structure (ref. 5.2 of chapter 5)

-----Key points for strategy and implementation (ref. 5.3 of chapter 5)”

The possibility and future prospect is really high, so there is a need for another advanced interview to obtain the most suitable model.

7.2 The interviewees and methods of interview

7.2.1 Target of the interviews

According to Taiwan’s implementation and design of the 5-year plan and the planning of the national design policy, the most influential people including government personnel, legal entities unit, manufacturers, design companies and design education institutes, were identified (a total of 8 people), who were interviewed with questionnaires:

Interviewees are as follows (for the time being)

A. Government and legal entities unit (2 interviewees)

1. IDB: **Mr. Ho Ming-Lang** (Vice General director of IDB), the planner and promoter of the Taiwan 5 year design implementation plan
2. CETRA: **Mr. K.H Wu** (Vice chairman of CETRA) The founder of CETRA and TWTC, have received honourably the 1999 national medal of the foreign relations.

B. Manufacturers (2 interviewees)

3. Information Technology: **Mr. Chien-Jui Wang** (Design manager of Acer Company) Acer computers has been one of the most famous brands in Taiwan and overseas.
4. Others: **Mr. Gukey Huang** (Research designer, Nan-Ya plastics company)

C. Design fields, Design companies (2 interviewees):

5. **Mr. Wen-Long Chen** (President of Nova design group) design consultant of the 5 year plan, former president of CIDA
6. **Ms. Jane Wu** (President of Total design company) designer of the vision design programme of 1995 ICSID Taipei design congress.

D. Design education institutes (2 interviewees)

7. **Dr. Hui-Liang Lin** (Chairman, Dept of I.D. and Graduate programme of Innovation Design, National Taipei University of Technology)
8. **Dr. Jun-Chieh Wu** (Associate professor, Dept of I.D., Hua-Fan Univeristy)

Remark: IDB—Industrial Development Bureau/MOEA

CETRA—China External Trade Development Council

TWTC—Taipei Word Trade Centre

CIDA—China Industrial Design Association (Taiwan)

ICSID—International Council of Societies of Industrial Design

7.2.2. Interviewing methods

1. Call the interviewee by phone, for confirmation.
2. Send questionnaire to the interviewee.
3. Introduce the interviewee to the subject of the questionnaire and fill out the questionnaire.
4. Organise and analyse the questionnaires after the interview.

7.3 Questionnaire

-Interviews Sample

Since 1979, the government of Taiwan, R.O.C. has actively helped the industries in developing new products. Beginning in 1989, the industrial development bureau (IDB) under the ministry of economic affair (MOEA) has implemented the five-year plan to upgrade industrial design. Ten years have passed since the implementation.

1. This plan has had a huge impact and has helped both the design field, design education field, it seems that the initial shape of Taiwan design policy has been substantially set up by the IDB. However, till now , if someone asks what the Taiwan's design policy is, it is difficult for general public to answer. Hence, I have researched into "Taiwan's National design policy" for many years.
2. To understand the design philosophy and strategy of the manufacturers, and the need of design, at the same time, to understand government and design promotion unit's experience and future plans, I have done a research using questionnaires to [Manufacturers, design companies, design education institutes and government bodies with specific legal entity units].
3. The analysis of findings is as follows of chapter 5's - 5.1, 5.2, 5.3.
4. To further the knowledge and to prove the theory in chapter 5's - 5.2 and 5.3 [value, possibility and future perspective], because of this, I have invited manufacturers, educational fields, design fields and government bodies with specific legal entity unit to represent, and have chose 8 people for the questionnaire of the Taiwan design policy.
5. This survey with interview is for academic research, your kind suggestions and ideas would be a criteria of the Taiwan's design policy's new model.

Thank you for your assistance and cooperation

Paul Cheng
November 1999/11/5

Question 1.

After years of research, I think the definition of a National Design policy is as follows:

“A national design policy is formulated to upgrade the level of product quality, design and image in order to raise the level of industrial competitiveness, improve the living conditions of its citizens and enrich its cultural life to create a highly civilised society. A National Design Policy is usually formulated by a country’s industrial, economic or trade authorities in charge and then entrusted to a design association or design centre or design promotion related organisation to draw up and implement the

Explanation: For Europe, America and Asia’s national level design, such as U.K, Germany, Japan, design policies have been directed by the government.

What suggestion do you have to the above statement of the “definition of a National design policy”?

Question 2.

What do you think of the “New model of Design policy in Taiwan” organisation structure (shown in chapter 5’s 5.2)?

1. Organisation structure:

1. Remain as it is (IDB delegate the design programmes to CETRA. CETRA act as the secretary. CIDA, CPC and CETRA implement the programmes together.)

cycle of product's would be extended further.

Design changes product, product changes manufacturers, manufacturers improves the economy. The cycle not only gives a manufacturer development improvement and economic strength, it also has endless push potential.

Design Sector

1. Mr. Wen-Long Chen (NOVA design)

A design is a strategy which when viewed by a company represents an improvement of value rather than an increase of cost. For a company the design is a plan. (Planning is "a series of thought whilst confronting resource and task, using the resource to it's best usage")

If the company has the correct knowledge and feeling, then the industrial design would be useful for the manufacturers. I think that this policy's organisation structure and technique will accomplish this kind of goal!

2. Ms. Jane Wu (Totel Design)

- According to the related manufacturers, the subsidy provided by the government for their product development might not be a positive cycle. Manufacturers and design sector need competitiveness but not be dependent on government's subsidy.
- It is hard for design companies to survive without the backing of

manufacturers with potential, not to mention the international view.

- After the government organised “The global fair” in 1995, there was not much improvement in the design promotion interest, there is even a sense of decline. Even though IDB’s 5-year plan is still in progress, there is no sense of continuation, the same goes to CETRA’s design centres.
- The twice a year design competition is not as lively as Taipei ICSID 95’. It gives people the impression that the government and the manufacturer’s pay little attention to design, not to mention the design sector’s participation.
- Taiwan’s design related associations don’t have much public trust, so the range of work that they can execute is narrow.
- Taiwan’s design policy is controlled by manufacturers development, but the design payment problem of the manufacturer has always blocked design’s improvement and development. In addition, design talents are hard to cultivate, giving the design sector a “vicious cycle” of problems.

According to the views above, Taiwan’s design environment is still premature, hence we need National design centre to improve the whole design environment.

Design Education

1. Dr. Hui-Liang Lin (Chairman, Dept of I.D. and Graduate programme of Innovation Design, National Taipei University of Technology)

Even though design talent’s training and cultivation starts with school education,

if the manufacturing sector doesn't participate from a practical point of view, then this results in "enough people with theoretical qualification " and "not enough people with practical experience". Before work's training should be improved, but also during work and after work's training should be looked into further too.

2. Dr. Jun-Chieh Wu (I.D. Dept. Hai-Fan University)

- Policy is a philosophical thought and goal
- Strategy is executive:
 - Strategy execution should need regular assessments, should be done by people who are been assisted, supervisors, related units.
 - Cultivation and training of talents could be done in collaboration with resource rich Business Management, training centres or combine management with design enlarging its boundaries, not only restricted in the organisation structure of design.
 - Other fields such as business management, and academic organisations should communicate and these also need to understand more about design. Currently there is the Business Management faculty of National Taiwan University who organize a Business Management research team cross-university competition. But the design sector's involvement is rare, this kind of competition is a good idea.
 - Not many scholars research "the influence of Information Technology on design".

7.5 Conclusions

7.5.1 A formation of the national design policy

After years of research and interviews with eight people (Chapter 7 to 7.2) the final suggested version of the definition of a National Design Policy would be as follows:

A national Design Policy is formulated to upgrade the level of product quality, design and image in order to raise the level of industrial competitiveness, improve the living conditions of its citizens and enrich its cultural life to create a highly civilised society; as a result, showing the country's competitiveness and economic strength.

The formation of a National Design Policy could be explained as follows:

A national Design policy is usually formulated by the country's government bodies inviting the industrial sector, educational research organisation, economic and trade units, for research of a complete design development policy suitable for their country, and then entrusted to a design related legal entity organisation to draw up and implement the projects. The policy should be reviewed non-periodically according to changes in time and environment to obtain a more complete design development policy.

7.5.2 The organisation structure of the "New model of design policy in Taiwan"

According to research results, the government and specific legal entity, design

education , and the design sector all approve the establishment of the " National Design Centre." So the organisation structure can be simplified.

1. "National Design Policy" box should include the involvement of IDB/MOEA.
2. The first step of the step by step establishment in "The Planning and Implementation unit of the policy and Design strategy" should be changed as follows: "Remain as it is. IDB delegate the design programmes to the government CIDA, CPC and CETRA...etc. implement the programmes together.
3. Step by step establishment could be represented by dotted lines. Cancellation of " The implementation and cooperative unit for Taiwan's northern central and southern area" box and replace "Unit for other functions" with "executive units for other functions".

7.5.3 Establishment of Taiwan Design Information Centre:

There is a need for the establishment of a Taiwan Design Information Centre. The function cannot only store libraries and information research: it should include different design types market information, design related research, living morphology research ...etc. Currently, the design sector and the manufacturing sector usually spend a vast amount of money and time on these types of work and the result is not satisfactory enough. Such a center should be fully equipped with design information, to provide help to the country's design unit, and can also further establish a knowledge network providing Taiwan's

design resource for global manufacturers.

7.5.4 Establishment of Taiwan Design and Technology museum:

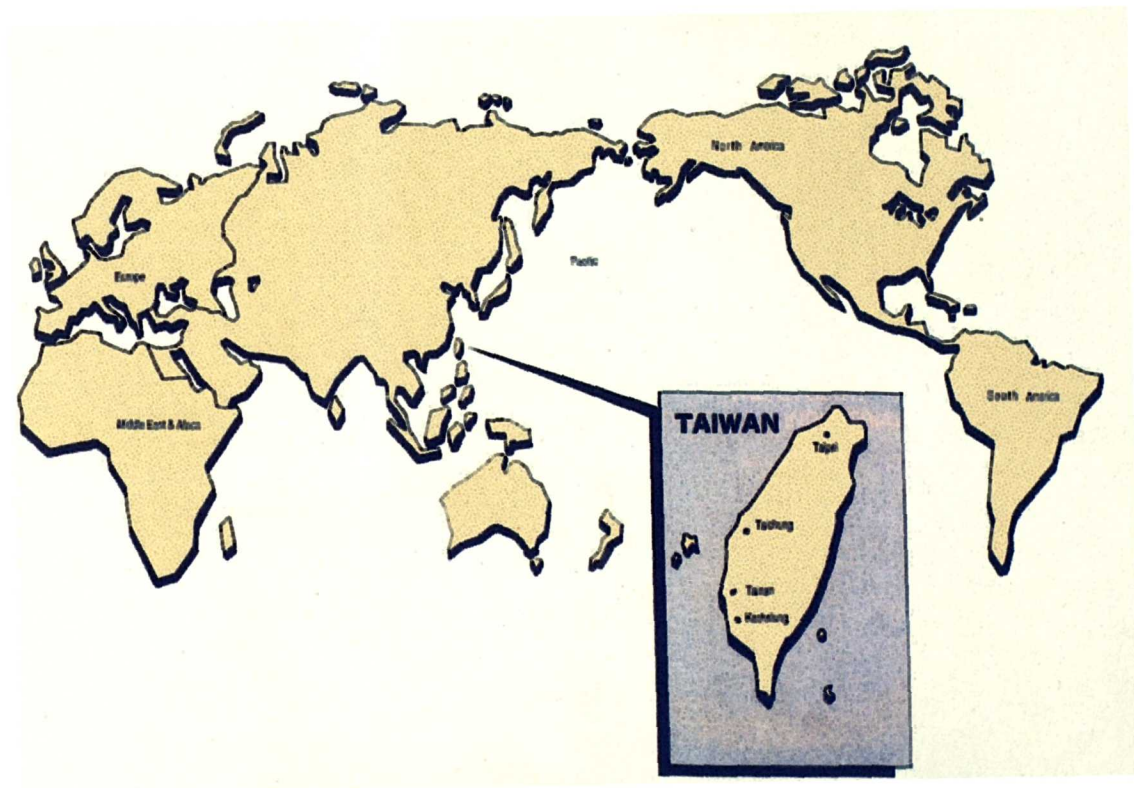
Agree totally having this kind of museum in Taiwan. But there is a need for governmental support and contribution from manufacturers, and also the community should have access to knowledge and pay more attention to design, making the establishment of the museum more worthwhile.

7.5.5 Comments to the Taiwan's design policy model and it's strategy implementation:

From the combining and interactive effort of design, industry, and government to form a new model brings great benefits to the product design and raising industry competitiveness. As Mr. M. L. Ho (IDB/MOEA) says: " when the government and public consider design as an important factor, manufacturer's competitiveness would improve continuously; when manufacturer possess design research and technology, product's life cycle would be extended further. Design changes product, product changes manufacturers, manufacturers improves the economy. The cycle not only gives manufacturer development improvement and economic strength, it also has endless push potential."

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Chapter 8 Conclusion



A model for the strategic implementation of design policy in Taiwan

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Chapter 8 Conclusion

8.1 Final model of the design policy in Taiwan

According to the evaluation, testing of the new model of the design policy in Taiwan in chapter 7, the final model can be established as follows:

8.1.1 The explanation of the Final Model –The Frame of the organization structure.

1. Government and Design policy

1. National design policy should be formulated by the government bodies, inviting industrial sector, education research organisation, economic and trade units etc.
2. Establish a committee of policy and strategy planning for research of a complete design development policy suitable for Taiwan.

IDB/MOEA represents the government bodies, which is the most suitable organisation, the program since IDB/MOEA has taken care of the industry policy and design promotion programs since 1970.

2. The planning and implementation unit of the policy and design strategy

Government and the structure of the implementation plan organisation is divided into two phases, and is established step by step:

1. Remain as it is (the government delegate the design programmes to CETRA, CIDA, CPC and CETRA implement the programmes together. And the government-IDB/MOEA supervises).
2. Establishment of a National Design center or appoint or establish a specific legal unit: Government could comply actual policy needs to integrate the plan and implement programs in order to integrate National Design resources.

3. Units for other functions

The other functions include schools, design associations, overseas Taiwan design centres (Germany, Italy, Japan, France, USA), design companies and other design related units. Information is very important for Taiwan's industry and design sector, so there is a need for a design information center in Taiwan. The establishment of a Design museum is also important for Taiwan.

Both the information centre and the design museum are under the National design centre or a specific legal unit. The work evaluation and promotion task force, which reviews and discuss each of the projects, is placed between "units of other functions" and "the planning & implementation unit of the policy and design strategy".

8.2 ■ Review of ams

The main aim of the study was to investigate and compare both global and Taiwanese design strategies in order to propose a new model for the strategic implementation of design policy in Taiwan. After Chapter 3 "The comparative study of national design policy in eight countries", Chapter 4 "The survey of design strategies development and implementation in Taiwan", Chapter 5 "Evaluation", a new model for the strategic implementation of design policy in Taiwan is built. Then after the evaluation of chapter 7, a "Final Model" is established, and then related to "The main aim of the study".

8.3 ■ How to assess effectiveness

Since 1989, the Industrial Development Bureau (IDB/MOEA) of Taiwan government started promoting five-year design plans, and combined CETRA, CPC, CIDA with industry, design companies, and design entities to execute all design activities in Taiwan.

Under this study project, the study of the “Final Model” went through numerous surveys and evaluations, and then was reviewed by experts and key persons from the relating fields, including the IDB/ MOEA, design companies, educational design entities, and the evaluations and assurances from the industry. For example, the significant person, Mr. M.L. Ho (Vice General Director of IDB/MOEA, the planner and promoter of Taiwan five-year design implementation plan) and other related people responsible for promotion, all assure this new model and the feasibility of the key points for the strategy and implementation. As a result, this “ Final Model” is a proper and efficient model for Taiwan.

8.4 Recommendation

8.4.1. Recommendations for the government

1. IDB/MOEA has been working with the assistance of the manufacturing sector, design sector and design education sector since 1979 giving a positive experience and result. Thus evolved the “Taiwan design policy embryonic form” into an actual “Taiwan design policy”.

At the same time, Taiwan’s Executive Yuan, and even the President of Taiwan needs to place more attention and sustain this promotion of this policy.

Other than that, there is also need for the promotion and explanation of the policy to the Legislative Yuan of Taiwan’s committee, so when reviewing the budget, they would provide assistance out instead of obstructing.

There should also be a step by step establishment of the Taiwan design museum and design information centre.

2. Manufacturers, design companies and design education institutes all need assistance from the government (ref. Chapter 5’s 5.1.2 Evaluation 2). The

government could assist accordingly when suitable. This would give the promotion of the Taiwan Design policy a big boost.

8.4.2 Recommendations for the industry

1. Should pay much attention to design development design, cultivation of design management talents, also employ more Taiwanese talents.
2. Develop design of own products and own brands where possible. Establish a more creative design of "international excellent image".
3. Establish manufactures design strategy and policy.
4. Provide design education sector's teachers practical research opportunities and provide the students chances for practice.
5. Make use of the overseas design bases-Germany, Italy, Japan, USA...etc design centers, develop designed products, collect and research product and market information, train design talents with global view.

8.4.3 Recommendations for design company

1. Need to cultivate design excellent practice talents and design management talents.
2. Can collaborate with overseas design centers in Europe, Japan, Italy to upgrade design quality, and also gaining global sense.
3. Participate more with international design related associations such as ICSID, ICOGRADA, IFI and WPO, increasing possibilities of exchanging international design views.
4. The designed works could enter international design fairs or competition to improve international image and increase confidence.
5. Computerisation is a global tendency, follow the international trend to be always creative.

8.4.4 Recommendations for design education sector

1. Need to cultivate teachers with international view and practical design management.
2. Collaborate with industry more often, to enrich and also at the same time assist the industry's design ability.
3. Improve creative and practical classes. There is a need to cultivate "design management", "design marketing", "design diplomacy and communication ability", "design education and methodology research", "design promotion and development" related talents.
4. Could include classes for the cultivation of the second generation's essence of the Taiwan's industry in design post-graduate programmes.
5. Encourage teacher or student to participate international design meetings to improve self-confidence and maintain international standard.

8.5 Suggestions for Further research

1. The design policy's research range is very broad, the research presented in this thesis is based on "industry design or product design". Other topics such as "Visual communication, market design, package design, environmental space planning, brand/logo design, image design...etc" could be researched further.
2. At the moment, Taiwan's industrial design and commercial design all have government's backing with a subsidy to encourage industrial sector and design sector to co-operate to create new products.
But the industry sector and design sector both doubt the fairness and the effectiveness on how the subsidy is given, and the amount of subsidy handed out. This could be another specific topic for research.
3. There is further research needed on the selection of overseas Taiwan design centres and the different design centres (Germany, Italy, Japan, and U.S.A.) function's efficiency, budget's effectiveness.

On the other hand, whether or not to place another new design centre in other overseas areas should depend on that area's industrial trade development potential towards Taiwan.

4. Cultural establishment can revolutionise Taiwan's style and image, this would be one other research topic needed for Taiwan's design policy.
5. Creation of Taiwan's own product brand bears a close relation to both Taiwan's international image and import/export value of manufacturer's product.

Currently, Taiwan's own product brand still faces many difficulties, at the same time a lot of Taiwanese manufacturers move to China, Vietnam or Thailand to build up factories, making many products being labelled "made in China". This would affect Taiwan's own product's competitiveness.

Hence, there is a need to research on how to establish own product brands with Taiwanese culture.

8.6 Finale:

(current & past situation in Taiwan for duration of research work)

For the past twenty to thirty years, Taiwan government has continued making efforts to raise international competitiveness of its goods for domestic and overseas markets. Especially since 1989, from "the five-year design plans", Taiwan has a policy "to improve the product innovation capability of manufacturing industry", but due to political reasons, for the recent twenty years Mainland China remains to be the main obstacle for the international promotion of Taiwan design products.

However, we need to understand how the potential changes in relationship with the Mainland China might affect the outcomes:

8.6.1 Mainland China still hinders Taiwan product design from developing internationally

In 1973, Taiwan design entities had eagerly participated in the ICSID Congress in Kyoto and promoted the international design activities. In 1985, when the Taiwan product participated in the World Design Exhibition, held in Washington D.C., United States, the name of Taiwan sponsors, China External Trade Development Council (CETRA), was forced to change, and the national flag was not allowed to hang. The changes were all due to the political pressure from the Mainland China, acting on the "American Exhibition Sponsoring Unit". Even uptodate, other countries treat Taiwan in a similar way as the United States in 1985, with the exception of Japan (a country that has more respect to Taiwan).

8.6.2 Taiwan products enter Mainland China by passing through a third country

1. Before Hong Kong was returned to Mainland China from the British, most Taiwan products entered Mainland China from Hong Kong. After the returning of Hong Kong, Taiwan products transferred through the Philippines or other third countries to enter Mainland China.
2. Recently due to both the labour and manufacturing cost in Taiwan increasing, Taiwan has lost its previous competitiveness. As a result, the Taiwan government needs to let certain industries to have manufacturing bases in China. Nowadays more and more companies from Taiwan have their branches in China for manufacturing and marketing. For examples, the computer and hi-tech related fields, daily products as shoes manufacturing, are all relocated in China for continuing operations. More than half of exported goods to Europeans and United States with "Made in China " labels

are the products of those Taiwanese industries that have manufacturing bases in China.

3. Also due to the Taiwanese industry continuing to move to Mainland China, it is getting very difficult to find appropriate labour for local industry. The government had no choices but to open up the importing labours from Philippine, Thailand, Vietnam, Indonesia and etc.

8.6.3 The problems between Mainland China and Taiwan

In the recent past ten years, the leader of the Taiwan government, Lee Dang-Hui is the first president elected by the people through the election. President Lee emphasises trade and building up the democratic system, and he becomes a "God father of Taiwan democracy" figure. On the other hand, Mainland China is still under the dictatorship government. Even though its leaders have tried to correct the path to emphasise on economy and trades, Mainland China still has gaps from modern democratic system.

The following is the similarity and differences between Mainland China and Taiwan.

1. The language and the culture background are similar, but Taiwan has more influence from the western Culture
2. The product processing of the OEM operation are similar for both sides, but Taiwan started innovation and design concepts more than twenty years ago.
3. The views on the political system and democracy are different.
4. The living standards of both sides are different, and the living standard of Taiwan is closer to Europeans and United States.
5. The size of land and the population on both sides have huge differences.
6. From May 20, of the year 2000, the second elected president from the Democratic Progress Party in Taiwan will start. Mainland China still continues its propaganda and military exercises to threaten Taiwan, and

Taiwan merchants in Mainland China are also pressured not to support the independence of Taiwan.

8.6.4 How might the potential changes in relationship with Mainland China affect the outcomes?

Nowadays, Taiwan and other democratic countries such as United States, British, Japan all want Taiwan and China to come to a peaceful resolution. If Mainland China uses military force to invade Taiwan, both sides will have lots of casualties. However, whether Taiwan becomes independent or not, if both sides continue to have dialogues on a peaceful resolution, both sides will benefit as follows.

1. Taiwan industry and product could combine with the power of the Mainland China to increase the efficiency of trades from both sides in domestic or overseas markets.
2. Taiwan government will gradually open up direct trade between Mainland China and Taiwan, without transferring goods through a third country.
3. The product guiding and product design services (including “the five-year design plans”) from Taiwan government could be served and extended to China. (Currently this is prohibited.)
4. When both sides join the World Trade Organisation (WTO), products around the world will enter both sides. The competition of product design will become severe and multi – patterned. No matter what, it will be a new challenge to both sides!

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Ms. Jenny M. Whitwam
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Course leader

Department of Design Management
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Dear Ms. Whitwam

I am pleased to learn that Mr. Paul Y. J. Cheng, Executive Director of Design Promotion Center of the China External Trade Development Council, the pioneer and leading design organization in Taiwan/ROC, would like to conduct a research study at De Montfort University.

In the past decade, the ROC's Ministry of Economic Affairs has drawn up various design projects to assist our manufacturers in upgrading their levels and capabilities of product design and to pursue the development of design in our country. Started in 1989, the Five-year Plan to Upgrade Product Design is the most important project among them, and its achievements have deeply influenced the development of our industry. With constant support and supervision from the Industrial Development Bureau of the MOEA, this five-year plan empowers the Design Promotion Center/ CETRA as its main implementing body.

Mr. Cheng has dedicated himself since 1979 in the planning and implementation of this plan, under which he has conducted many design counseling and research projects. I am sure his research on the topic "Design Policy in Taiwan" will be a very meaningful task, and the results will contribute new vision to our country and the international community. I will give my full support to his study and will offer any necessary information or assistance.

I wish Mr. Cheng's research at De Montfort University great success, and I look forward to seeing the results of his research.

With best regards,

Sincerely yours,



Dr. C. M. Yip
Director General
Industrial Development Bureau MOEA

Austin-Smith:Lord
Architects Designers Planners

17 Bowling Green Lane
London EC1R 0BD
Telephone: 071 251 6161
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► Mrs J Whitwam
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PJL/shm
30 September 1994

Austin-Smith:Lord

Dear Mrs Whitwam

PAUL CHENG

I am delighted to recommend Mr Paul Cheng, the Executive Director of the Design Promotion Center of Cetra, for your PhD course. I have been involved with the CSD for nearly 40 years and internationally from 1963.

Paul Cheng has been at the heart of Taiwans involvement with Industrial Design and is more than sensitive to the trends of developing countries and his experience is probably unique of the Pacific Rim.

I wish him every success.

Should you wish to have any further information perhaps you could contact me.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Peter Lord', with a large circular flourish at the beginning and a long horizontal stroke extending to the right.

PETER LORD

cc Paul Cheng



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Mein Zeichen

Essen, den 11th October 1994

Dear Mr. Cheng,

with great interest I heard of your plan to undertake Ph.D. research in the field of Design Strategy and Management at De Montford University, Leicester. It goes without saying that I sent the letter of recommendation to Mrs. Whitwam (4-10-94) in which I pointed out your excellent qualities.

I hope for your *successful research* and I am sure to hear of your best results as far as I got to know you.

With kind regards,

Prof. Stefan Lengyel

Nagaoka Institute of Design
197, Miyazeki-Machi
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October 4, 1994

Mrs. Jenny Whitwam
School of Design and Manufacture
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Dear Mrs. Whitwam

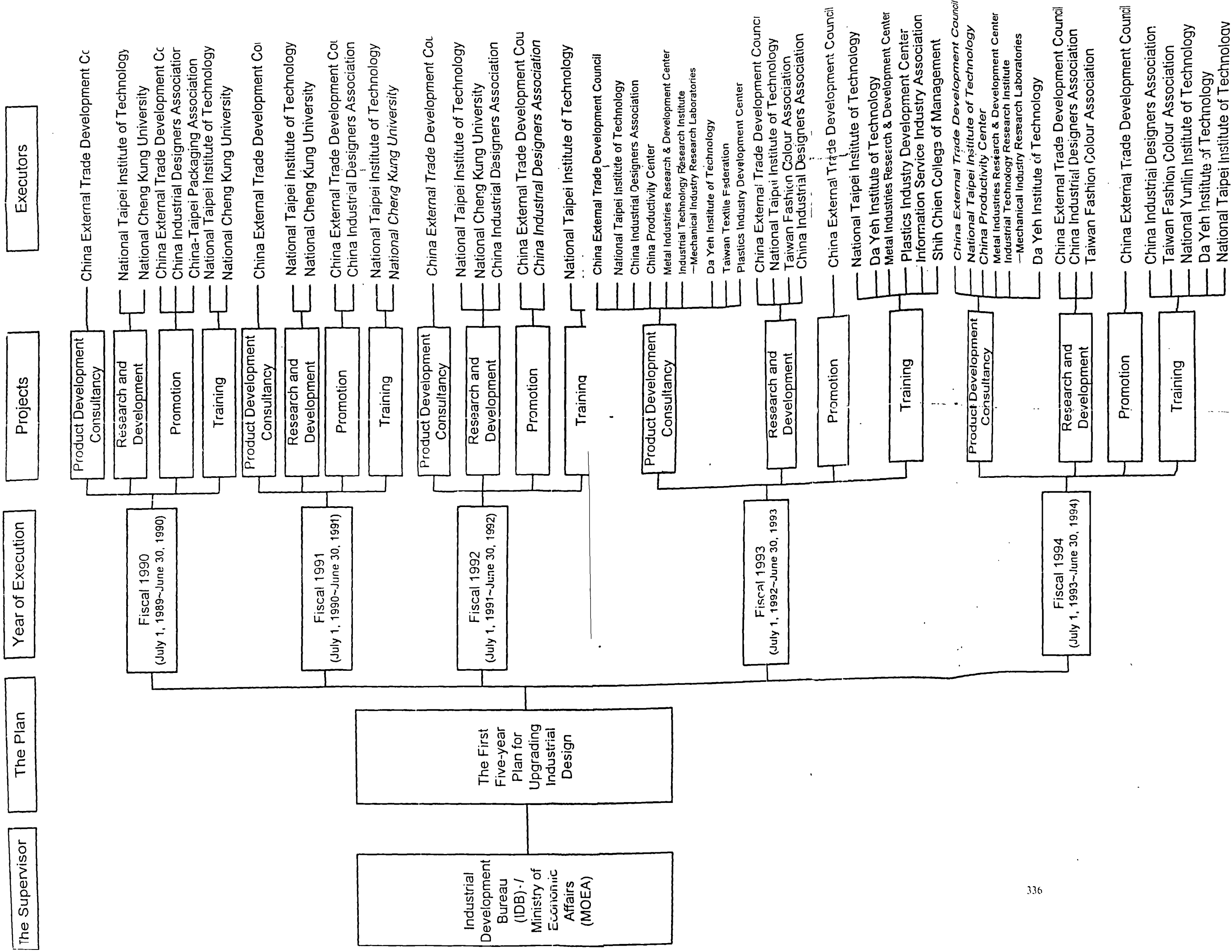
I suppose you have already heard about the intention of Mr. Y. J. Cheng in Taiwan to study at your university. He is my old friend, and I always appreciate the brilliance of his talent. He now hopes to do research on Design Strategy and Management at De Montfort University. I am grateful to you if you kindly consider the acceptance of his request.

I enclose a summary of Mr. Cheng's background. Also enclosed a brochure of Nagaoka Institute of Design. I hope you will find it enjoyable.

Yours sincerely,

Kyo Toyoguchi

Kyo Toyoguchi
President



NATIONAL
ENDOWMENT
FOR THE
ARTS

*The Federal agency
that supports the
visual, literary and
performing arts to
benefit all Americans*

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Literature

Locals

Media Arts

Museum

Music

*Opera-Musical
Theater*

*Presenting &
Commissioning*

State & Regional

Theater

Visual Arts

June 23 1993

Mr. Paul Y. Cheng
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Republic of China

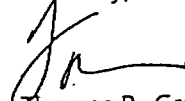
Dear Paul:

Thank you for speaking at the conference/workshop on forming a U.S. Design Council and Office of Federal Design Quality. The information and insight you provided were very useful to the participants.

While the meeting produced a general consensus on the need, mission and priorities of a design promotion organization (most people did not think word "council" or "center" should be used), they differed on the most appropriate structure and realistic political strategy for achieving the desired result. We will keep working on this as we believe the Clinton Administration is receptive to making design an integral part of its economic policy.

Again, thank you for giving us the benefit of your expertise.

Sincerely,



Thomas B. Grooms
Program Manager
Federal Design Improvement

P.S. Hope you enjoyed Aspen.

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4 February 1997

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I have great pleasure in sending you a copy of the Design Council Annual Review 1996 which we have recently published.

During 1996 the Design Council worked to build new knowledge about how design can be used effectively in business, education and government, and to build awareness of the important role design plays. Our work is primarily focussed on Great Britain, but we are keen to keep in touch with our international colleagues and hope that we can continue to do so in the future.

I hope you find the Design Council Annual Review 1996 informative and interesting. If you would like to know more, please be in touch.

Andrew Summers
Chief Executive

Working towards excellence
Design in Education Week
March 1997

Chapter 4 Surveys of Design Strategic Development and Implementation in Taiwan

Questionnaire

4.3.1

Domestic Manufacturing Circles

Since 1979, the government of Taiwan, R.O.C. has actively helped the industries in developing new products. Beginning in 1989, the Industrial Development Bureau(IDB) under the Ministry of Economic Affairs(MOEA) has implemented the Five-year Plan to Upgrade Industrial Design. Ten years have passed since this implementation. In order to understand the industries' design philosophy and strategy, their practice of design strategies, their design requirements and requirements on all relevant design organizations, and their expectations on the government, this survey on design strategic development and implementation in Taiwan is being conducted as a reference in drawing up Taiwan's design policy.

This survey is purely for academic research purposes and we will hold secret the filled information of your company and fillers themselves. Please kindly answer the following questions and send the questionnaire back to us.

Thank you for your assistance and cooperation.

1. The following design projects are included in "The Five-Year Plan for the Overall Upgrading of Product Design (1989-1994, 1994-1999)," which The government (the Industrial Development Bureau under the Ministry of Economic Affairs) has entrusted CETRA to execute.

Please check the one(s) you have knowledge of. (Multiple Choice)

- ① ☐ Product Design Consultation and Diagnosis
- ② ☐ Product Development and Design
- ③ ☐ Supply of Market Information by Industry or by Product
- ④ ☐ Cultivation and Training of Design Talents
- ⑤ ☐ Others(Please state the Design Promotion activity)

2. Please evaluate the results of the following government-sponsored design projects. (please check)

① Product Design Consultation and Diagnosis

☐ Very Satisfactory ☐ Satisfactory ☐ Average ☐ Unsatisfied ☐ No Comment

② Product Development and Design guidance

☐ Very Satisfactory ☐ Satisfactory ☐ Average ☐ Unsatisfied ☐ No Comment

③ Supply of Market Information (by Industry or by Product)

☐ Very Satisfactory ☐ Satisfactory ☐ Average ☐ Unsatisfied ☐ No Comment

④ Cultivation and Training of Design Talents

☐ Very Satisfactory ☐ Satisfactory ☐ Average ☐ Unsatisfied ☐ No Comment

⑤ Others

3. Has your organization used the services of any foreign design companies for the past three years?

① ☐ Yes (Please specify)

② ☐ No

4. Of the following services, which is (are) most helpful for your company for the next five years? (Please choose no more than 4 items.)

① ☐ Supply of New Design Techniques and Methods

② ☐ Instilling design concept.

③ ☐ Exploration of Overseas Markets

④ ☐ Supply of Design Information by Industry or by Market

⑤ ☐ Introduction of Suitable Foreign Design Companies as Cooperation Partners

⑥ ☐ Formulation of Corporate Design Policy

⑦ ☐ Training of Design Talents with an International Market Perspective

⑧ ☐ Promotion of Product Development Cooperation among People from Same or

Different Professions

⑨ ☐ Offer of Subsidies in Product Design and Development Projects

⑩ ☐ Offer of Actual Assistance in Product Design and Development

11 ☐ Strengthening of Protection Measures for Intellectual Property Rights

12 ☐ Other Comments (Please Specify)

5. Please check the following problems, which might face your company

when developing new products in the next five years ?

(Please choose no more than 4 items.)

- ① ☐ Difficulty in Recruiting Qualified Designers
- ② ☐ Lack of Design Management Talents
- ③ ☐ Conservative Approach to Company Management by Top Executives
- ④ ☐ Lack of Information on Overseas Markets for Particular Products
- ⑤ ☐ Lack of Domestic Design Information
- ⑥ ☐ Difficulty in Finding Suitable Design Companies
- ⑦ ☐ No Guarantee for Success in Undergoing Product Design and Development Projects
- ⑧ ☐ Low Efficiency in Product Development
- ⑨ ☐ No Breakthrough in Product Development Techniques
- ⑩ ☐ Difficulty in Protecting Intellectual Property Rights
- 11 ☐ Difficulty in Identifying the Most Appropriate Time for Product Launch
- 12 ☐ Limited Product Development Budget
- 13 ☐ Restrictions of Original Equipment Manufacturing (OEM) practices
- 14 ☐ Lack of Long-term Product Development Strategies
- 15 ☐ Operation of the Company Not Keeping Pace with Environmental Changes
- 16 ☐ Difficulty in Sales Promotion Because of Lack of Brand Identity
- 17 ☐ Other Comments (Please Specify) _____

6. Should the Plan include projects to educate the general public, in addition to domestic manufacturers, about the concept of design?

- ① ☐ Necessary.
- ② ☐ Unnecessary.
- ③ ☐ Any Other Comments: _____

7. Please indicate your company's strategy(ies) in the use of domestic design resources in

the next five years are: (Multiple Choice)

- ① ☐ Mainly using the design policy resources of the Industrial Development Bureau under the Ministry of Economic Affairs.
- ② ☐ Entering a long-term cooperative relationship with foreign designers (design companies).
- ③ ☐ Not seeking specific cooperation with foreign designers for product development, but would consider the wider options depending on market and strategic changes
- ④ ☐ Developing new products on your own, but seeking consulting services from foreign designers
- ⑤ ☐ Seeking the services of domestic design companies in product design and development
- ⑥ ☐ Still practicing the Original Equipment Manufacturing (OEM)
- ⑦ ☐ We have no strategies for new product design in the next five years
- ⑧ ☐ Others _____

8. What project(s) do you think Taiwan's industrial design policy, formulated by the Industrial Development Bureau under the Ministry of Economic Affairs, should be included to best serve the industries? (Please choose no more than 4 items.)

- ① ☐ Establishment of a national design studio to assist manufacturers in product design and development
- ② ☐ Establishment of designers' training center to train designers and design managers
- ③ ☐ Establishment of R & D center for design techniques to provide manufacturers with the latest design techniques
- ④ ☐ Establishment of design information collection and processing center to provide manufacturers with design and market information
- ⑤ ☐ Establishment of promotion and exhibition center for good-design products promotion, as well as establishment of a national design museum
- ⑥ ☐ Establishment of center of foreign design resources to act as a go-between for the use of such resources and to promote international design cooperation
- ⑦ ☐ Establishment of design policy research center to assist the government in drawing up design policy
- ⑧ ☐ Increasing the Number of Taipei Design Centers overseas
- ⑨ ☐ Establishment of a national design center
- ⑩ ☐ Other Comments (Please Specify) _____

9. What are the overseas markets your company will enter with products of good design in the next five years?

- ① ☐ We have no such plan.
② ☐ We do have such plan. (please answer the No. 10 question)

10. What of the following overseas markets your company will actively explore with using good product design ?

- ① ☐ Europe ② ☐ North America ③ ☐ Japan ④ ☐ Latin America
⑤ ☐ mainland China ⑥ ☐ Other (Please specify) _____

11. What overseas countries (areas) will your company approach for design resources (manpower and information)? (multiple choice)

- ① ☐ no requirement
② ☐ North America ③ ☐ Japan ④ ☐ Germany ⑤ ☐ Italy ⑥ ☐ The U.K.
⑦ ☐ Other (Please specify) _____

12. Out of your company's own considerations, of the following projects what the government's design policy should do and how ?

① Research on particular design subjects: _____

② Designers' Training: _____

③ Assistance on Product Design and Development: _____

④ Design Information Collection and Analysis: _____

⑤ Formulation of Design Policy: _____

⑥ Establishment of a National Design Center _____

⑦ Suggestions on the Five-Year plan to upgrade industrial design: _____

Please complete the following:

Basic Information of the Filler

1. Information of the Company

(1) Name of the Company _____

(2) Date of Establishment _____

(3) Nature of Business _____

Manufacturing (By Industry) _____

A. Main Products _____

B. Major Market(s) (Multiple Choice)

☐ Japan ☐ The U.S. ☐ Europe ☐ Latin America ☐ Southeast Asia

☐ mainland China ☐ Domestic ☐ Other

C. Original (Own) Brand Manufacturing (OBM) _____%

Original Design Manufacturing (ODM) _____%

Original Equipment Manufacturing (OEM) _____%

(4) Number of Employees _____

(5) Budget _____

2. Information of the Filler

(1) Name : _____

(2) Position: ☐ Chief Executive Officer (CEO) ☐ Head of Department (Section)

☐ Designer ☐ Other (Please specify) _____

(3) Educational Background: ☐ Design ☐ Mechanics (Engineering) ☐ Marketing

☐ Other (Please specify) _____

(4) Schooling Record: ☐ Graduate School ☐ University (College)

☐ High (Vocational) School

☐ Other (Please specify) _____

(5) Age: ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ Over 60

Date: _____ Year _____ Month _____ Day

Chapter 4 Surveys of Design strategic development and Implementation in Taiwan

Questionnaire

4.3.2

Design Company

Since 1979, the government of Taiwan, R.O.C. has actively helped the industries in developing new products. Beginning in 1989, the Industrial Development Bureau(IDB) under the Ministry of Economic Affairs(MOEA) has implemented the Five-year Plan to Upgrade Industrial Design. Ten years have passed since this implementation. In order to understand the industries' design philosophy and strategy, their practice of design strategies, their design requirements and requirements on all relevant design organizations, and their expectations on the government, this survey on design development and implementation in Taiwan is being conducted as a reference in drawing up Taiwan's design policy.

This survey is purely for academic research purposes and we will hold secret the filled information of your company and fillers themselves. Please kindly answer the following questions and send the questionnaire back to us.

Thank you for your assistance and cooperation.

1. Computer software is necessary in modern design, but it is very expensive. Do you think that the government should offer assistance in this respect?

- ① ☐ Yes.
- ② ☐ No, not at all
- ③ ☐ No comments

2. Computer software is necessary in modern design. But it is very expensive. How did you think the government should offer assistance?

- ① ☐ sponsorship or loan.
- ② ☐ The government buys relevant equipment and software, and lease them to design studio or companies.
- ③ ☐ Other comments, please specify _____

*(*Design companies not located in Taiwan, please skip questions #3 & #4.)*

- § 3. Do you consider that the designers' training program is very practical?
- ① ☐ The curriculum is very practical and effective.
 - ② ☐ The curriculum is practical and effective.
 - ③ ☐ The curriculum is average in practicality and effectiveness.
 - ④ ☐ The curriculum is with little practicality and effectiveness.
 - ⑤ ☐ The curriculum is not practical and effective.
- § 4. Do you think that the overseas designers training program is very practical?
- ① ☐ No, not necessary.
 - ② ☐ Yes, it's essential.
 - ③ ☐ No comments.
5. Do you think that the government should act as a bridge of communication among designers in order to improve their mutual understanding, as well as to raise designers overall prestige.
- ① ☐ No, not necessary.
 - ② ☐ Yes, it's essential.
 - ③ ☐ No comments.
6. How should the government offer help in enhancing designers' communication? Establish a...(please choose one item only)
- ① ☐ designers council.
 - ② ☐ designers foundation.
 - ③ ☐ designers club
 - ④ ☐ designers association.
 - ⑤ ☐ other comments: _____
7. What is your comment on the application procedure for government sponsored product development programs? The procedure are...
- ① ☐ not clear enough, more details are needed.
 - ② ☐ Good, so we should remain the current system.
 - ③ ☐ complicated, so simplification is required.
 - ④ ☐ very complicated, so simplification is urgently needed.
8. What is your comment on the practice of drafting and presenting report on the achievements of government-sponsored project after its completion? The reporting practice is...
- ① ☐ very important, but more details are needed.
 - ② ☐ fair, the current system should remain.
 - ③ ☐ in need of simplification
 - ④ ☐ too complicate, so simplification is urgently needed.
9. What do you think of the establishment of a national design museum? The national

design museum is...

- ① ☐ No, not necessary.
- ② ☐ Yes, it's essential.
- ③ ☐ No comments.

10. At present the government(IDB) has entrusted China External Trade Development Council (CETRA) to implement the Five-year Plan to Upgrade Industrial Design. But CETRA is mainly a trade promotion organization. Do you think the government should establish an independent "national design center? "

- ① ☐ Not necessary
- ② ☐ No change (The IDB continues to entrust CETRA to implement the "Five-year Plan to Upgrade Industrial Design)
- ③ ☐ Necessary (Establishment of a national design center with independent administrative and management functions, to bring into full play national design promotion).

11. Based on your demand, in what way do you suggest the government should assist your company? On the issue of the ...

① study on specific design topics; _____

② designer's training; _____

③ assistance in product development and design _____

④ collection and analysis of design information _____

⑤ design policy _____

⑥establishment of a National Design Center; _____

⑦Suggestion on the Five-year Plan to Upgrade Industrial Design _____

Please complete the following:

Basic Information of the Filler

1. Company Name: _____

2. Company History : Founded in _____

3. Your staff constitution:

| Profession | Number of people |
|-----------------|------------------|
| Designer | |
| Planner | |
| Marketing Staff | |
| Engineer | |
| Others | |
| Total | |

4. The annual business turnover of your company is around NT.
less than 1,000 000 ☐ 1,000,000 ~ 5,000,000
5,000,000 ~ 10,000,000 ☐ more than 10,000,000

∴ (1 us dollar equals about 32 NT dollar)

5. Your company is specialized in

- ☐ product design ☐ graphic design
☐ other, (such as; public relations, advertisement, display, design
management,...etc.)

6 Personal background of the filler,

①Name : _____

②Your position is:

president or general manager ☐ dept. head ☐ designer
others _____

③ Your educational background is

- ☐ design planning ☐ design ☐ printing
☐ mechanical or engineering ☐ marketing
☐ others _____

④Your level of education is

- ☐ graduate school or above ☐ university and college ☐ high school
☐ others _____

⑤ Your age is

- ☐ 20 – 29 ☐ 30 – 39 ☐ 40 - 49 ☐ 50 - 59 ☐ 60 and above

Date: _____ year _____ month _____ day

Chapter 4 Surveys of Design Strategic Development and Implementation in Taiwan

Questionnaire

4.3.3

Scholars at Design Education Institutes (Experts in Design Consultation and Diagnosis)

Since 1979, the government of Taiwan, R.O.C. has actively helped the industries in developing new products. Beginning in 1989, the Industrial Development Bureau (IDB) under the Ministry of Economic Affairs (MOEA) has implemented the Five-year Plan to Upgrade Industrial Design. Ten years have passed since this implementation. To understand the practice of design philosophy strategy, and requirement of manufacturers, and to understand the experience, opinions and expectations of scholars at design educational institutes who have participated in government-sponsored design guidance projects, we are conducting this survey of Taiwan's design strategic development and implementation. We will analyze the results as a reference in drawing up Taiwan's design policy.

This survey is purely for academic research purposes and we will hold secret the filled information of your organization and of fillers themselves. Please kindly answer the following questions and send the questionnaire back to us.

Thank you for your assistance and cooperation.

1. The following design projects are included in "The Five-Year Plan for the Overall Upgrading of Product Design (1989-1994, 1994-1999)," which the government (the Industrial Development Bureau under the Ministry of Economic Affairs) has entrusted CETRA to execute.
Please check the one(s) you have knowledge of. (Multiple Choice)
☐ ① Product Design Consultation and Diagnosis
☐ ② Product Development and Design
☐ ③ Supply of Market Information by Industry or by Product
☐ ④ Cultivation and Training of Design Talents
☐ ⑤ Others _____
2. Of the many following design projects implemented by the government (IDB), which do you think you can be of service? (Multiple choice)
☐ ① designers training
☐ ② industrial design consultation and diagnosis
☐ ③ research on particular subjects of design
☐ ④ participation of product development and design projects of manufacturers
☐ ⑤ cooperation with manufacturers on design projects
☐ ⑥ others _____

3. What is your comment on the following modes of cooperation between manufacturers and design educational institutes? (Multiple choice)
- ① ☐ cooperation in accordance with yearly fiscal plan, with the government or manufacturers providing financial subsidies, while design educational institutes provide relevant services)
 - ② ☐ cooperation depending on different conditions of particular projects, with the government or manufacturers providing financial subsidies
 - ③ ☐ others _____
4. What is your comment on the ownership of intellectual property rights after completion of design guidance projects? (Please choose one item only)
- ① ☐ scholars executing these projects are entitled with the rights but can be transferred to manufacturers if need be.
 - ② ☐ The current practice should be kept as it is. This means that the government and manufacturers who subsidized the projects should have co-ownership of the rights. However, with the consent of the government, manufacturers can have the right to make use of the rights.
 - ③ ☐ The government should have the rights. But they can be transferred to manufacturers on reasonable demand.
 - ④ ☐ The rights should be owned and used by manufacturers.
 - ⑤ ☐ others _____
5. Design and marketing information are very important during the process of new product development. How do you collect this information?
I collect it from...(Multiple choice)
- ① ☐ library on campus
 - ② ☐ personal research
 - ③ ☐ information organization out of campus
 - ④ ☐ in need of assistance with such collection
 - ⑤ ☐ others _____
6. Do you think Taiwan should establish a design museum?
The Design Museum is...
- ① ☐ No, not necessary.
 - ② ☐ Yes, it is essential.
 - ③ ☐ No comments.
7. At present the government(IDB) has entrusted China External Trade Development Council (CETRA) to implement the Five-year Plan to Upgrade Industrial Design. But CETRA is mainly a trade promotion organization. Do you think the government should establish an independent "national design center? "
- ① ☐ No, it is not necessary.
 - ② ☐ No, keeping it as it is. (The IDB continues to entrust CETRA to implement the "Five-year Plan to Upgrade Industrial Design)
 - ③ ☐ Necessary (Establishment of a national design center with independent management administrative and management functions, to bring into full play national design promotion.)

8. Based on your demand, in what way do you suggest the government should assist your company? On the issue of the ...

①study on specific design topics; _____

②designer's training; _____

③assistance in product development and design _____

④collection and analysis of design information _____

⑤formulation of design policy _____

⑥establishment of a national design center; _____

⑦suggestion on the Five-year Plan to Upgrade Industrial Design _____

Please complete the following:

Basic Information

1. Name of Your college: _____

2. You specialty is:

☐ industrial design ☐ design management ☐ design strategy

☐ packaging design ☐ graphic design ☐ product design

☐ others _____

4. Personal background of filler:

a. Name : _____

b. Your position is:

☐ dept. head ☐ professor ☐ lecturer ☐ other _____

c. Your educational background is:

☐ design ☐ design management ☐ other _____

d. Your level of educational is:

☐ graduate school or above ☐ university and college ☐ high school

other _____

e. Your age is

20 - 29 ☐ 30 - 39 ☐ 40 - 49 ☐ 50 - 59 ☐ 60 and above

Date: _____ year _____ month _____ day

Thank you for completing this questionnaire. Please return to:

Chapter 4 Surveys of Design Strategic Development and Implementation in Taiwan

Questionnaire

4.3.4

Government Agencies (Including relevant design organizations)

Since 1979, the government of Taiwan, R.O.C. has actively helped the industries in developing new products. Beginning in 1989, the Industrial Development Bureau(IDB) under the Ministry of Economic Affairs(MOEA) has implemented the Five-year Plan to Upgrade Industrial Design. Ten years have passed since this implementation. In order to understand the industries' design philosophy and strategy, their practice of design strategies, their design requirements and requirements on all relevant design organizations, and their expectations on the government, this survey on design strategic development and implementation in Taiwan is being conducted as a reference in drawing up Taiwan's design policy.

This survey is purely for academic research purposes and we will hold secret the filled information of your organization and fillers themselves. Please kindly answer the following questions and send the questionnaire back to us.

Thank you for your assistance and cooperation.

1. Which statements below are the biggest bottlenecks in Taiwan's industrial design development? (Please choose no more than four items.)

- ① ☐ Conservative concepts from leader(s) of the company
- ② ☐ Deficiency in manpower of at design manager level
- ③ ☐ Deficiency in experienced designers
- ④ ☐ Deficiency in design promotion capability
- ⑤ ☐ Deficiency in interaction among designers, officials, and design educators.
- ⑥ ☐ Deficiency in concepts of design internationalization
- ⑦ ☐ Unclear industrial design policy
- ⑧ ☐ Deficiency in design departments in companies
- ⑨ ☐ Deficiency in experienced international design companies
- ⑩ ☐ Deficiency in fees of product development
- 11 ☐ Others _____

2. Do you think government agencies should establish a special department (design

development commission for example) responsible for integrating and leading domestic manufacturing and design circles in design development while raising the status of designers. The department should also be able to inspire manufacturers to pay more attention to design.

① ☐ Not necessary

② ☐ No change (Section 4 of Industrial Development Bureau is responsible for design development)

③ ☐ Necessary (please specify) _____

3. Do you think the government should, by providing financial subsidies, encourage manufacturers to seek the services of domestic and foreign design companies in product design and development?

① ☐ Not necessary

② ☐ Not change (currently providing 50% or less in subsidy, depending on product design requirement of manufacturers)

③ ☐ Case by case (depending on the nature of the project)

4. In addition to Taipei design centers in Germany, Italy, Japan, and France, do you think the government should establish more overseas design centers as liaison offices for manufacturers, so that foreign design resources can be put to best use?

① ☐ No change

② ☐ To set up more design centers overseas

③ ☐ To reduce the scope of overseas Taipei Design Centers situations.

5. Do you think the government should render assistance in the establishment of a museum of products of good design, or a national design museum, thus providing a good environment for the spread of knowledge and creative thinking for the education sector and manufacturers?

① ☐ Necessary

② ☐ Not necessary

③ ☐ depending on the actual requirement from manufacturers or other relevant organizations

6. Do you think the national design policy should be promoted by a commission with representatives from various government agencies? Should a corporal organization be entrusted by the government to execute the said policy?

① ☐ Not necessary

② ☐ No change (IDB is now asking corporal organization to conduct a relevant research)

③ ☐ Necessary

7. At present the government(IDB) has entrusted China External Trade Development

Council (CETRA) to implement the Five-year Plan to Upgrade Industrial Design. But CETRA is mainly a trade promotion organization. Do you think the government should establish an independent "national design center? "

- ① ☐ Not necessary
- ② ☐ No change (The IDB continues to entrust CETRA to implement the "Five-year Plan to Upgrade industrial design)
- ③ ☐ Necessary (Establishment of a national design center with independent administrative and management functions, to bring into full play national design promotion.)

8. What the government's national design policy should do and how?

① designers' training: _____

② planning of design policy: _____

③ establishment of national design center _____

④ establishment of national design museum _____

⑤ suggestions on the Five-year Plan to Upgrade Industrial Design: _____

Please complete the following:

Basic Information of the Filler

Name: _____ Title: _____

Organization: _____

Date: _____ Year _____ Month _____ Day

Thank you for completing this questionnaire. Please return to:



1. PRESENT OCCUPATION:

- President, Taiwan Footwear Research Institute (Since March 2000)

2. POSITION IN OCCUPATION & EDUCATION:

- Chairman and president, Taipei Design Centre Milan, Italy (Since May 1998 – March 2000)
- **Executive Director**, Design Promotion Centre, China External Trade Development Council (CETDC), Taipei (Since 1979-April 1998)
- **Associate Professor**, Commercial Design Dept. Chungyuan Christian University (Since 1985-April 1998)
- **Associate Professor**, Graduate Design Programme National Taiwan Institute of Technology (Since 1991-April 1998)

3. MEMBERSHIP:

- International Council of Societies of Industrial Design (ICSID): **Board Director** (1989-1993)
- China Industrial Designer Association, Taiwan (CIDA): **Board Director** (since 1990) / chairman of the Board (1995-1997)
- South African Design Association (SIDA): **Honourary Member** (since 1991)
- Mexican Industrial Design Association (MIDA): **Honourary Member** (since 1992)

4. EDUCATION HISTORY:

- The Honourary **Degree of Doctor of Design**, De Montfort University, Leicester, UK (July 1998).
- Essen University (Germany), Industrial Design Dept., **M.A. Diploma in Design** (1969-1971).
- National Taiwan Normal University, Fine Arts Department: **B.A.** (1962-1964).